

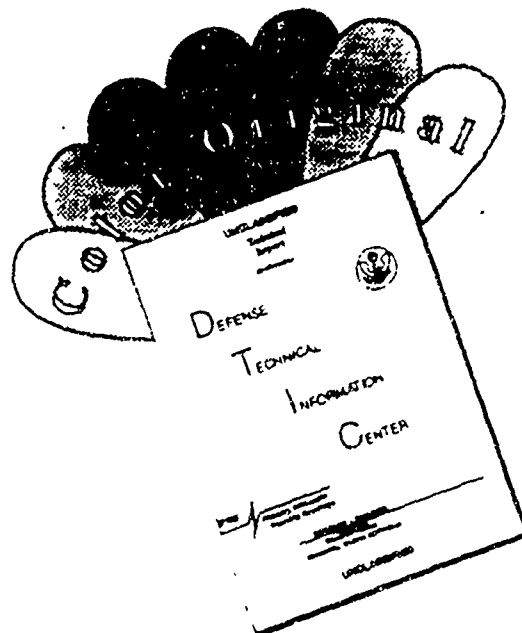
Antarctic Ice Charts 1989-1990.

NAVAL POLAR OCEANOGRAPHY CENTER WASHINGTON DC

1992

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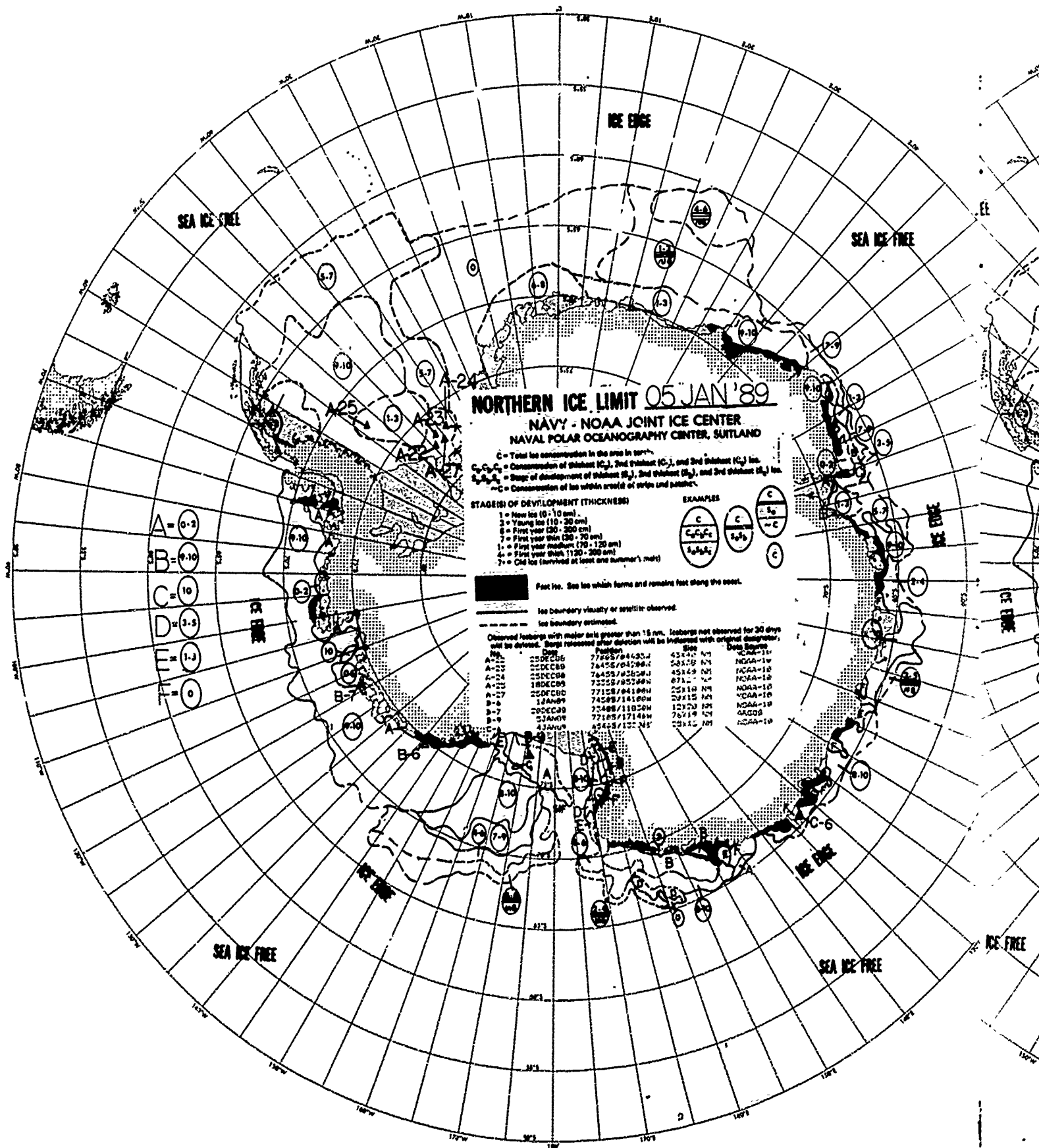
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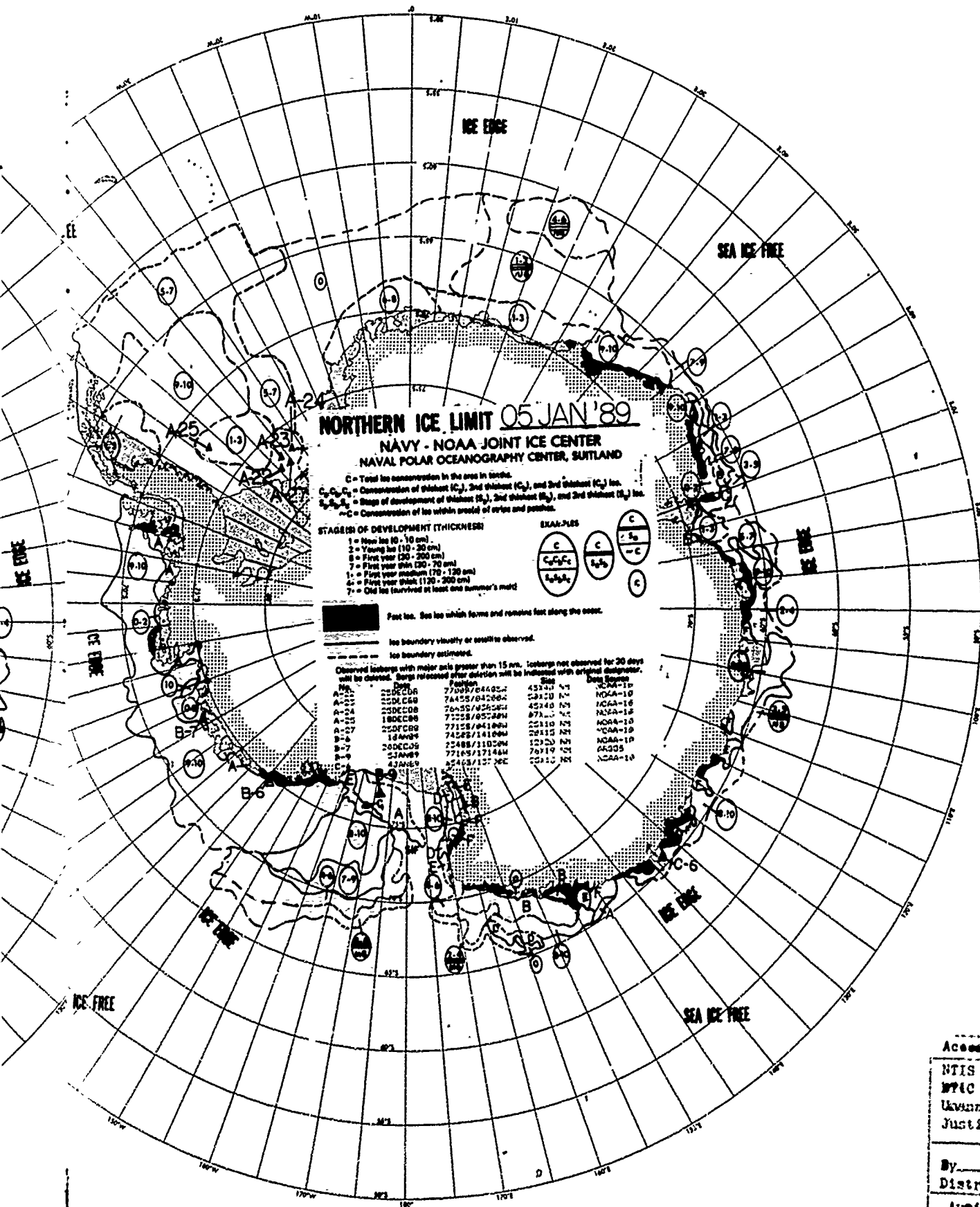


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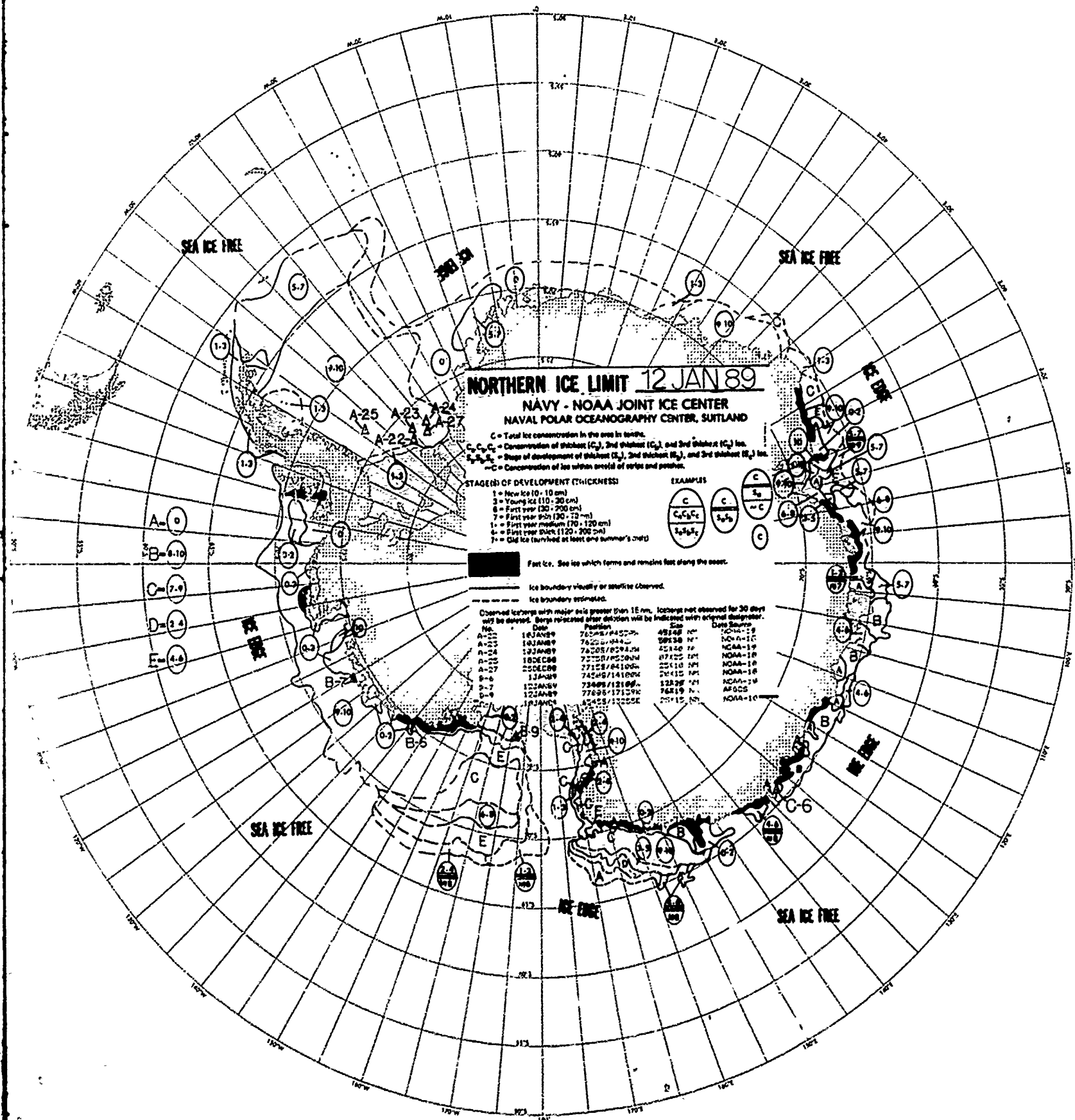
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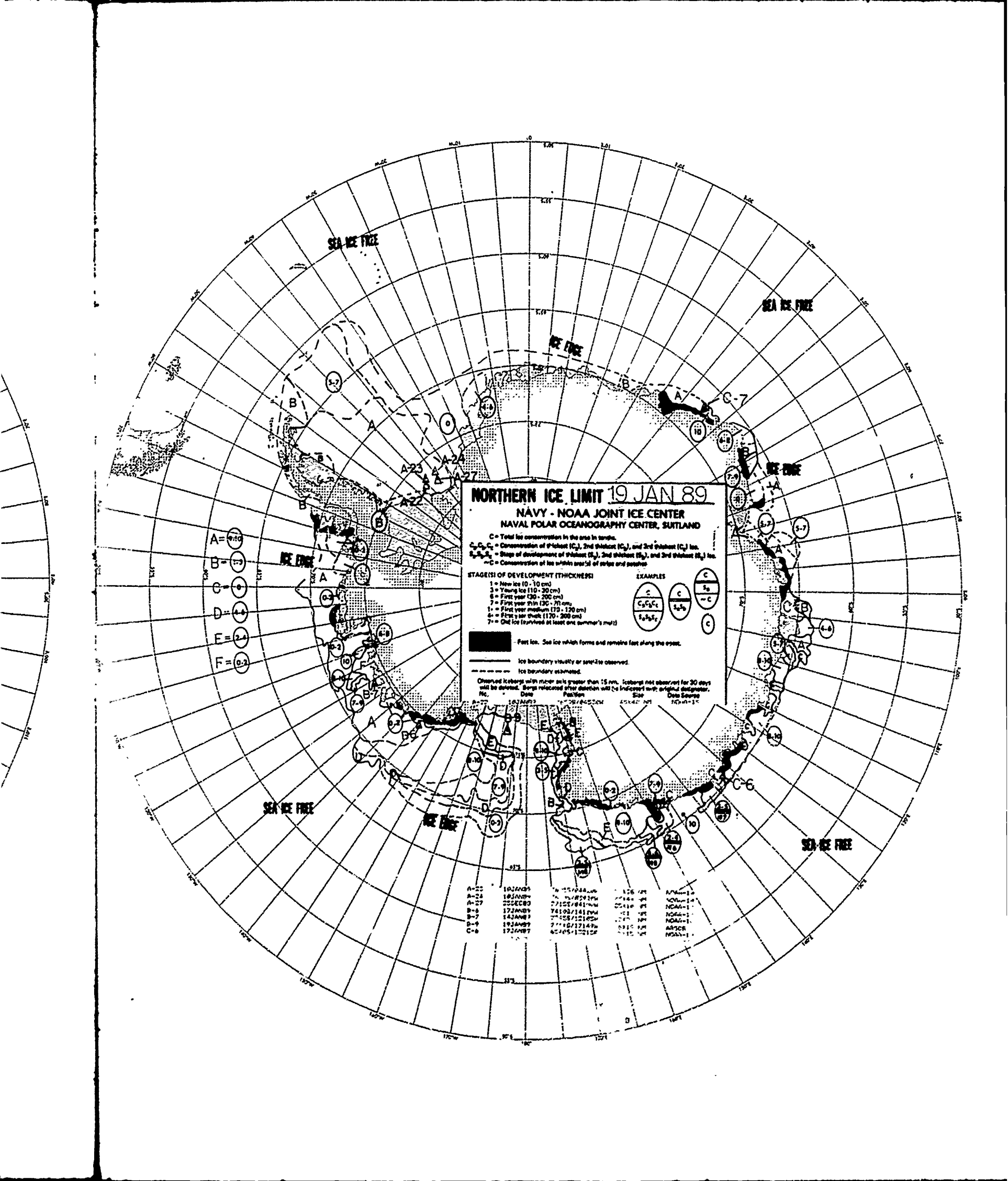
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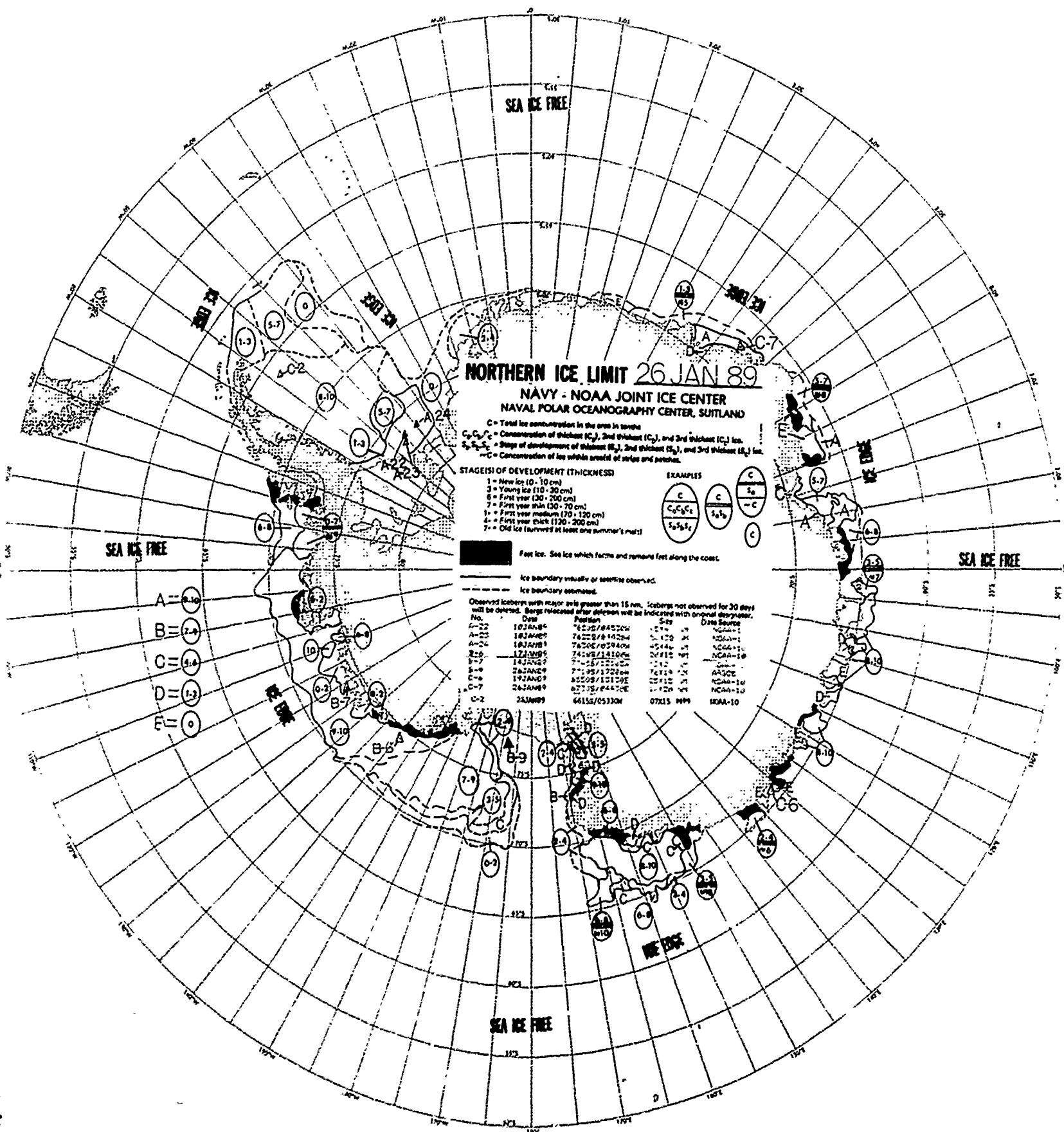
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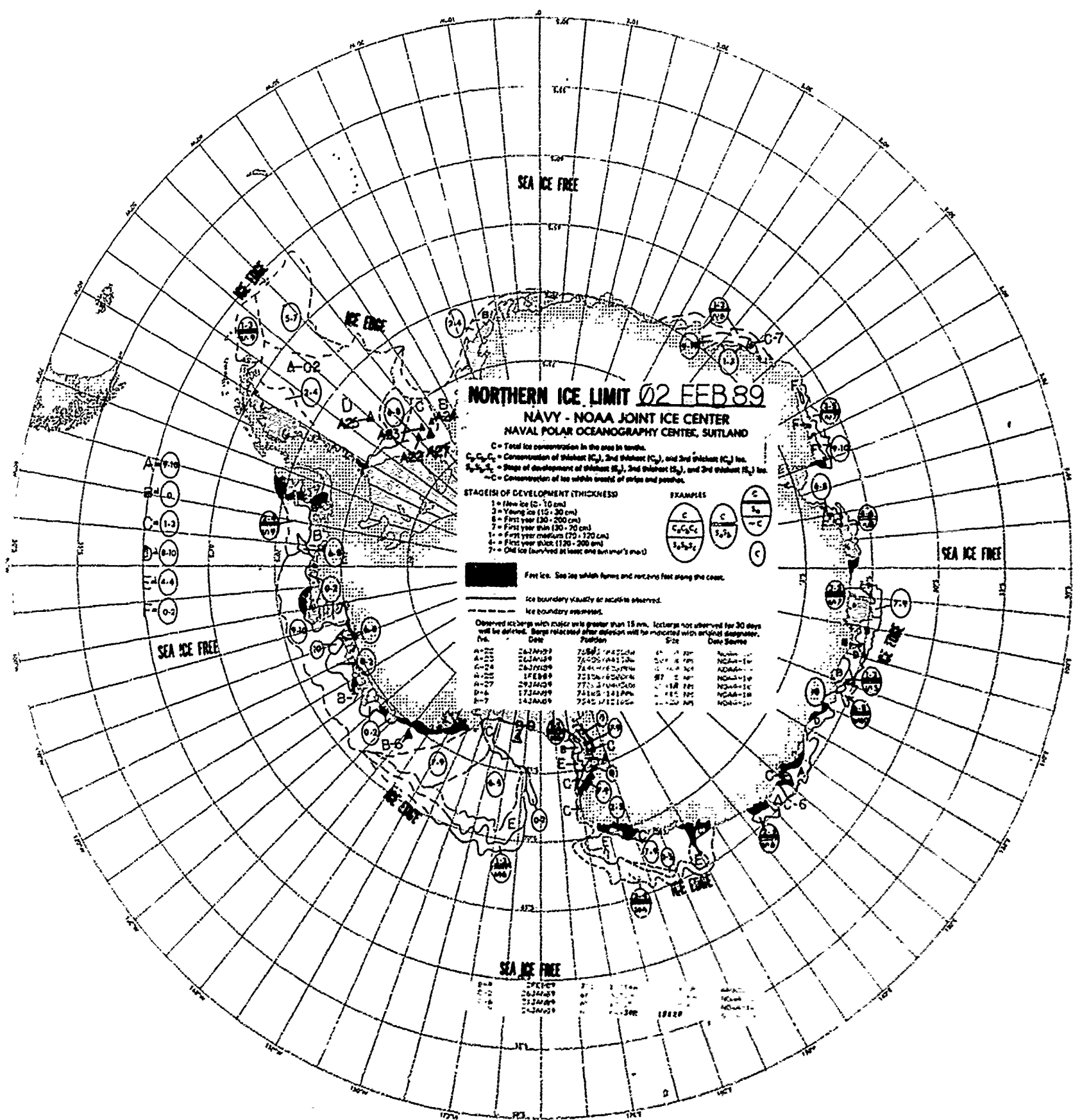
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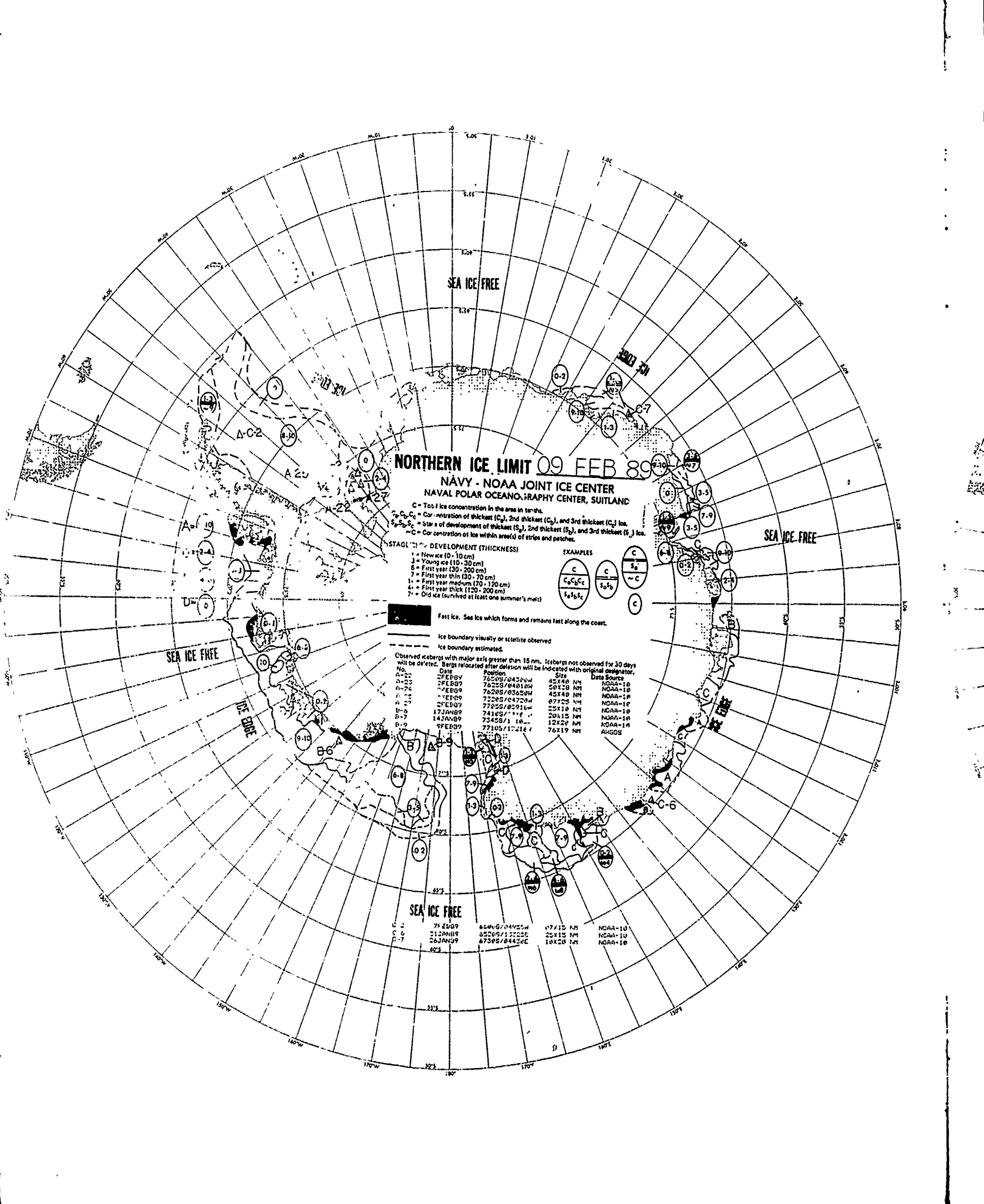
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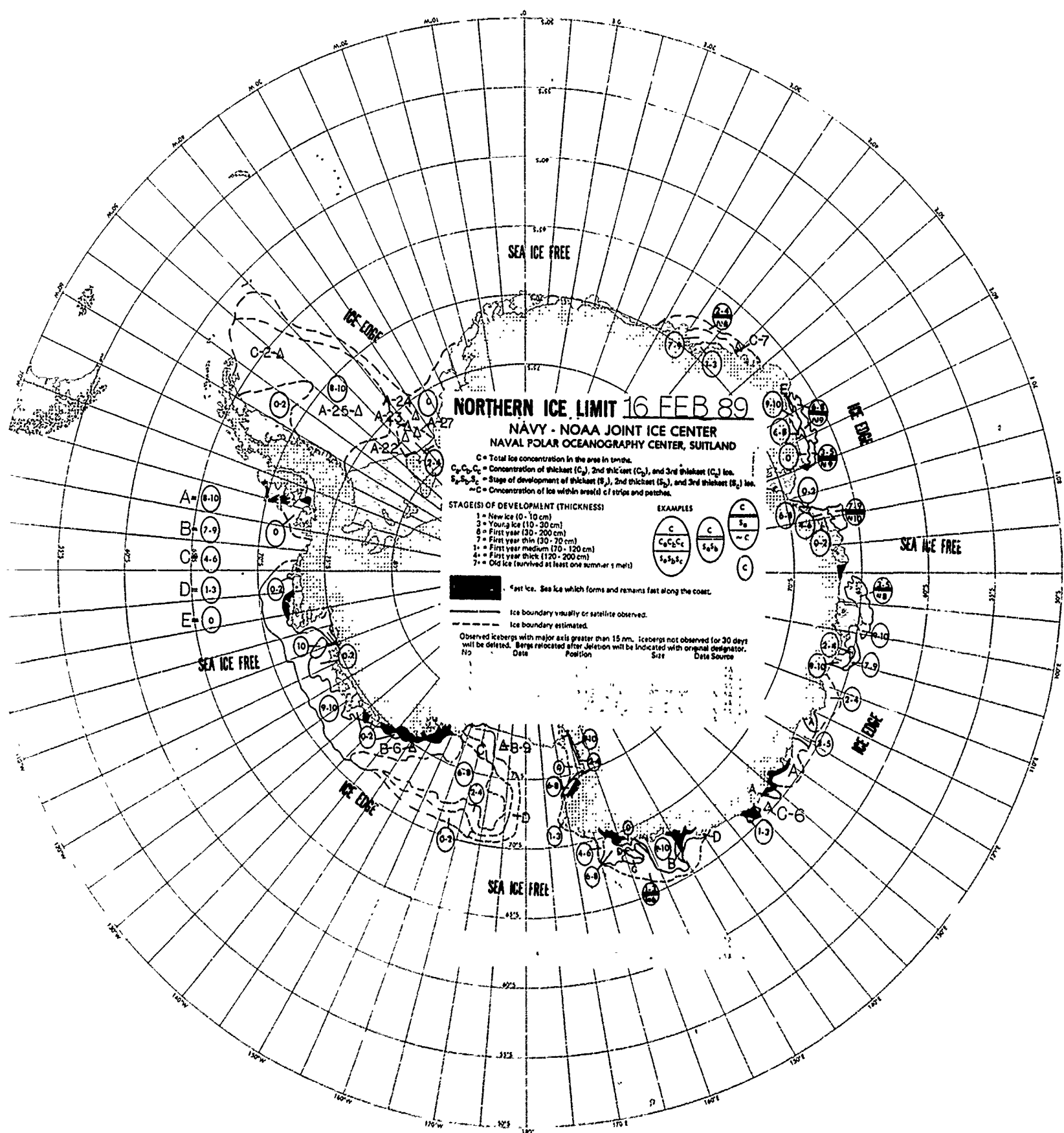


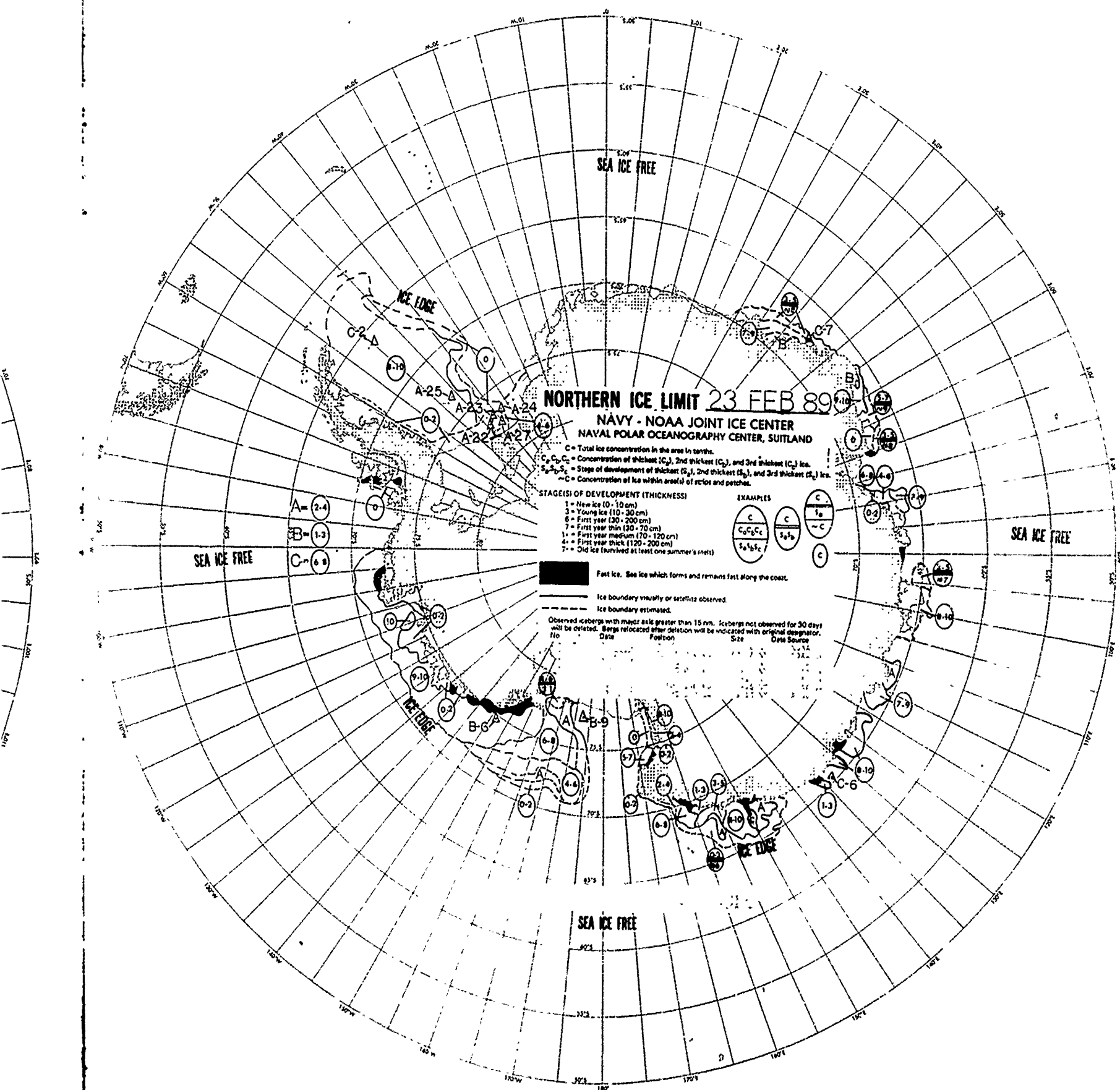


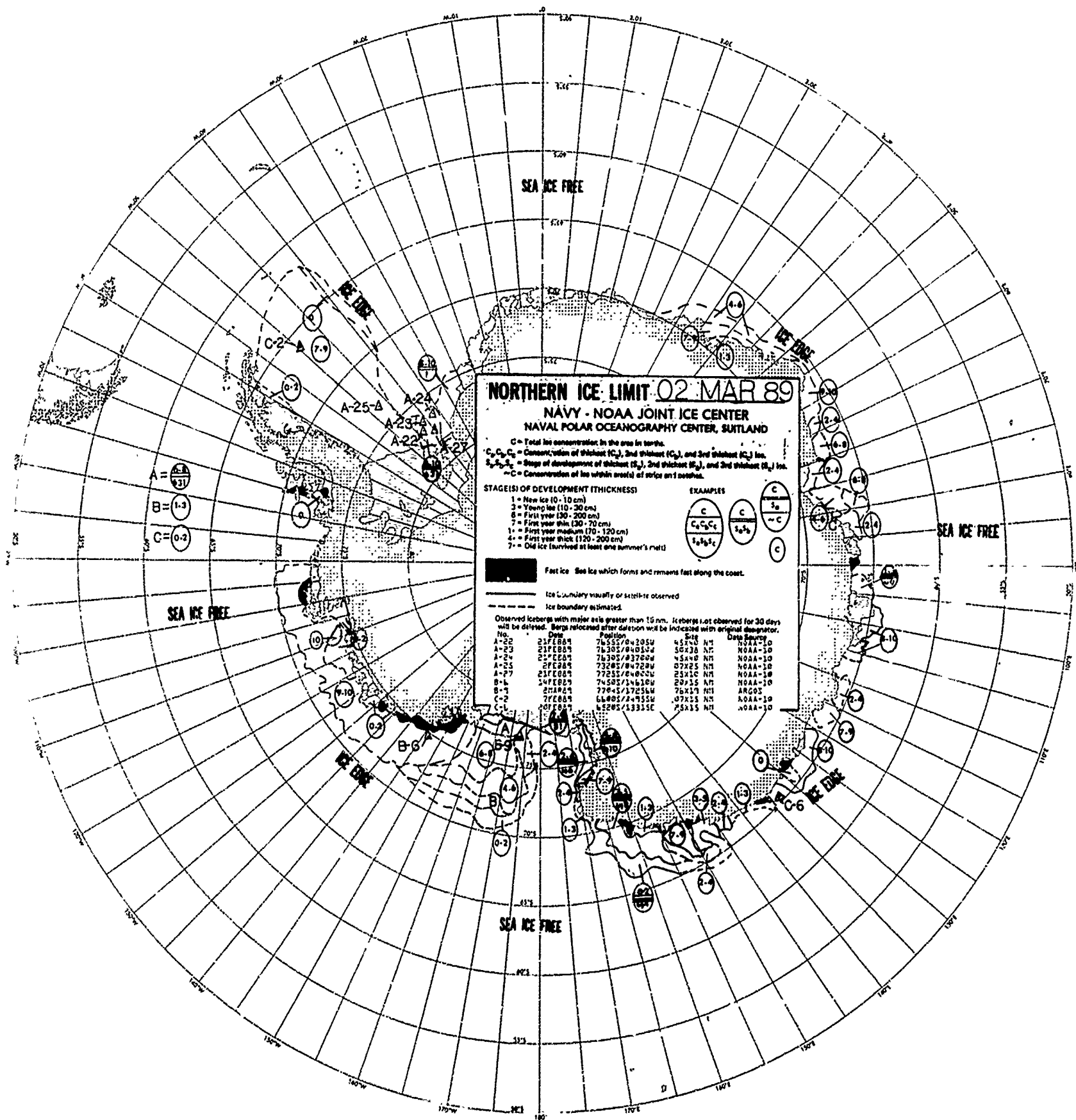












NORTHERN ICE LIMIT 09 MAR '89

**NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND**

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
-C = Concentration of ice within areal of series and patches.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (10 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 200 cm)
- 4 = First year thin (30 - 70 cm)
- 5 = First year medium (70 - 120 cm)
- 6 = First year thick (120 - 200 cm)
- 7 = Old ice (survived at least one summer melt)

EXAMPLES



Fast ice. Sea ice which forms and remains fast along the coast.

Ice boundary visually or satellite observed.

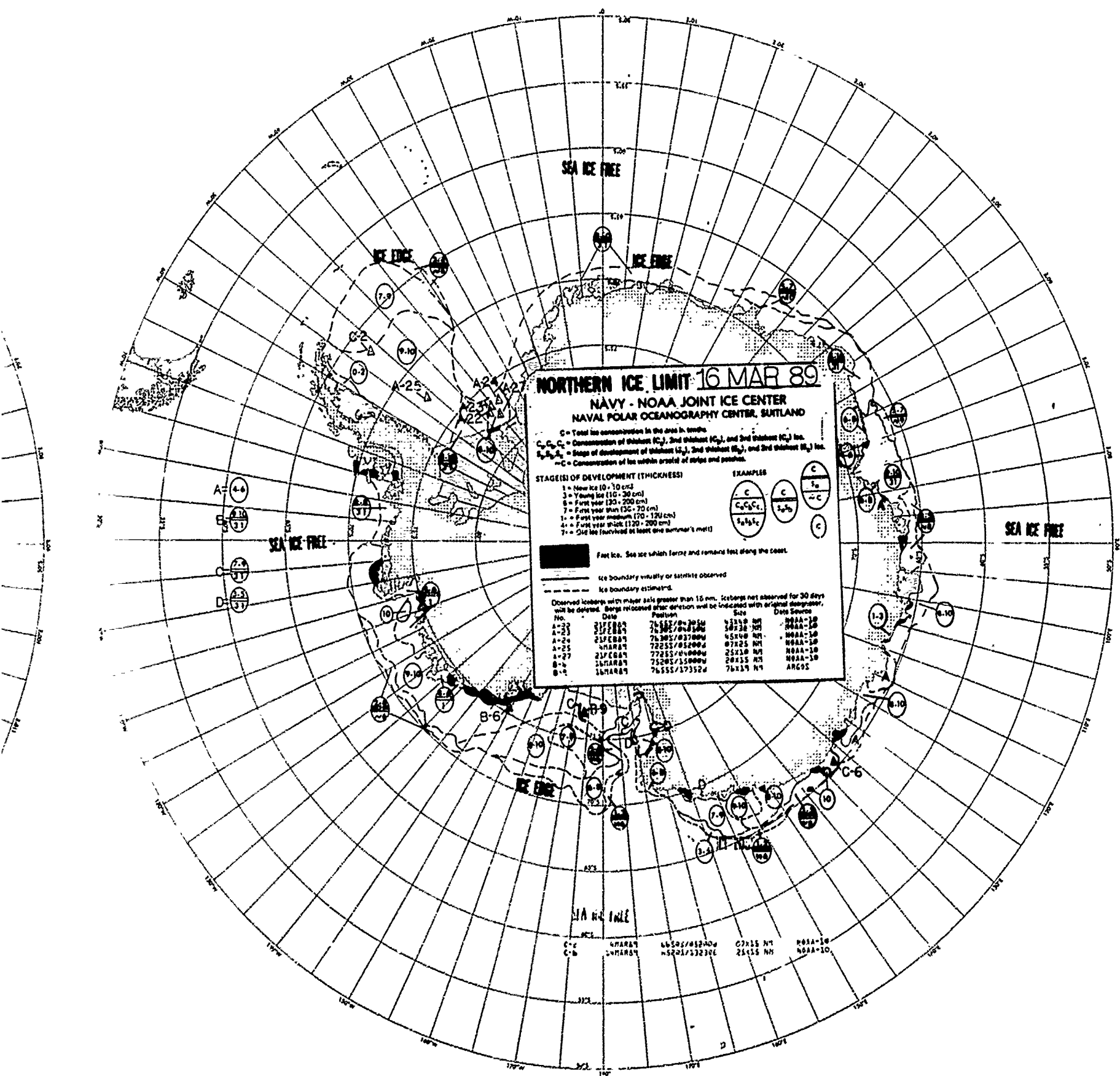
Ice boundary estimated.

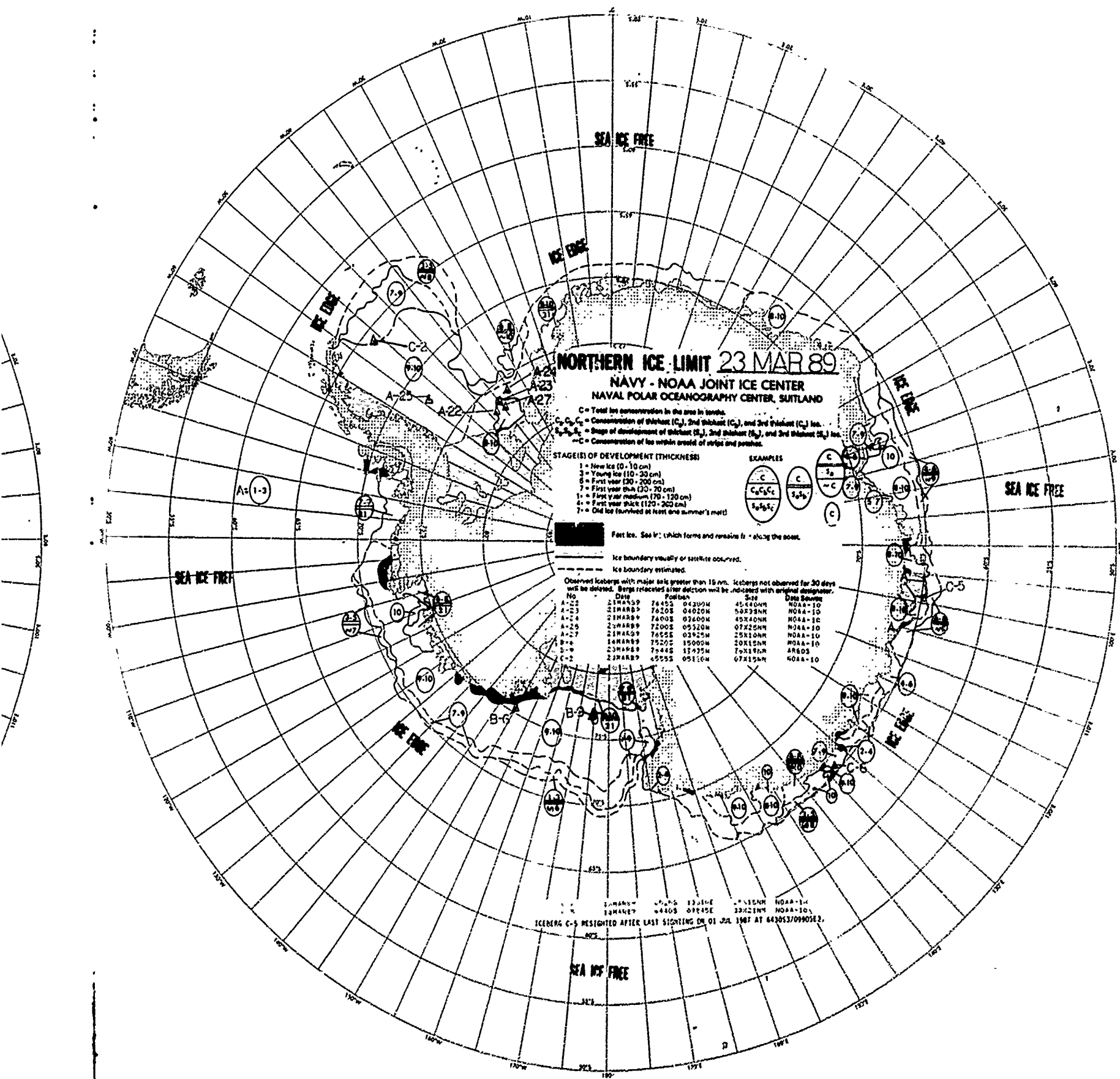
Observed icebergs with major axis greater than 10 nm. Icebergs not observed for 30 days will be deleted. Berge relocated after deletion will be indicated with original designator.

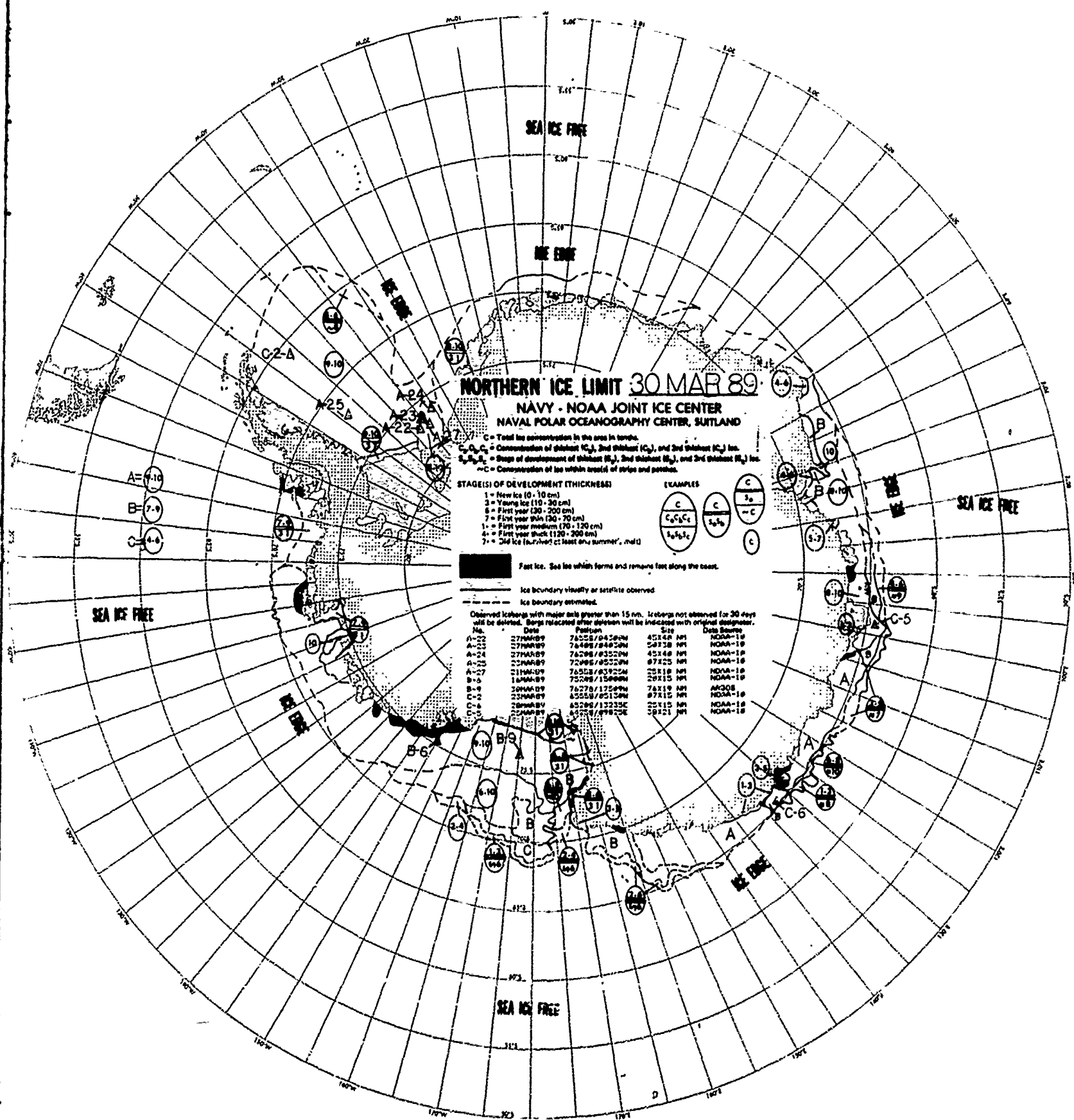
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A-25	21 FEB 87	72255/05200W	07000 M ²	NOAA-10
A-27	21 FEB 87	77255/04000W	25000 M ²	NOAA-10
B-6	21 MAR 87	75555/15000W	20000 M ²	NOAA-10
B-7	21 MAR 87	77035/17320W	70000 M ²	APGOS

SEA ICE FREE

C-2	21 MAR 87	66505/05200W	07000 M ²	NOAA-10
C-6	21 MAR 87	65205/17310E	25000 M ²	NOAA-10







NORTHERN ICE LIMIT 30 MAR 89

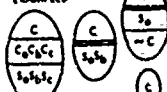
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

C = Total ice concentration in the area in tenths.
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S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
-C = Concentration of ice within areas of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

- 1 = New ice (10 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 200 cm)
- 4 = First year thin (30 - 70 cm)
- 5 = First year medium (70 - 120 cm)
- 6 = First year thick (120 - 200 cm)
- 7 = Old ice (survived at least one summer, melt)

EXAMPLES



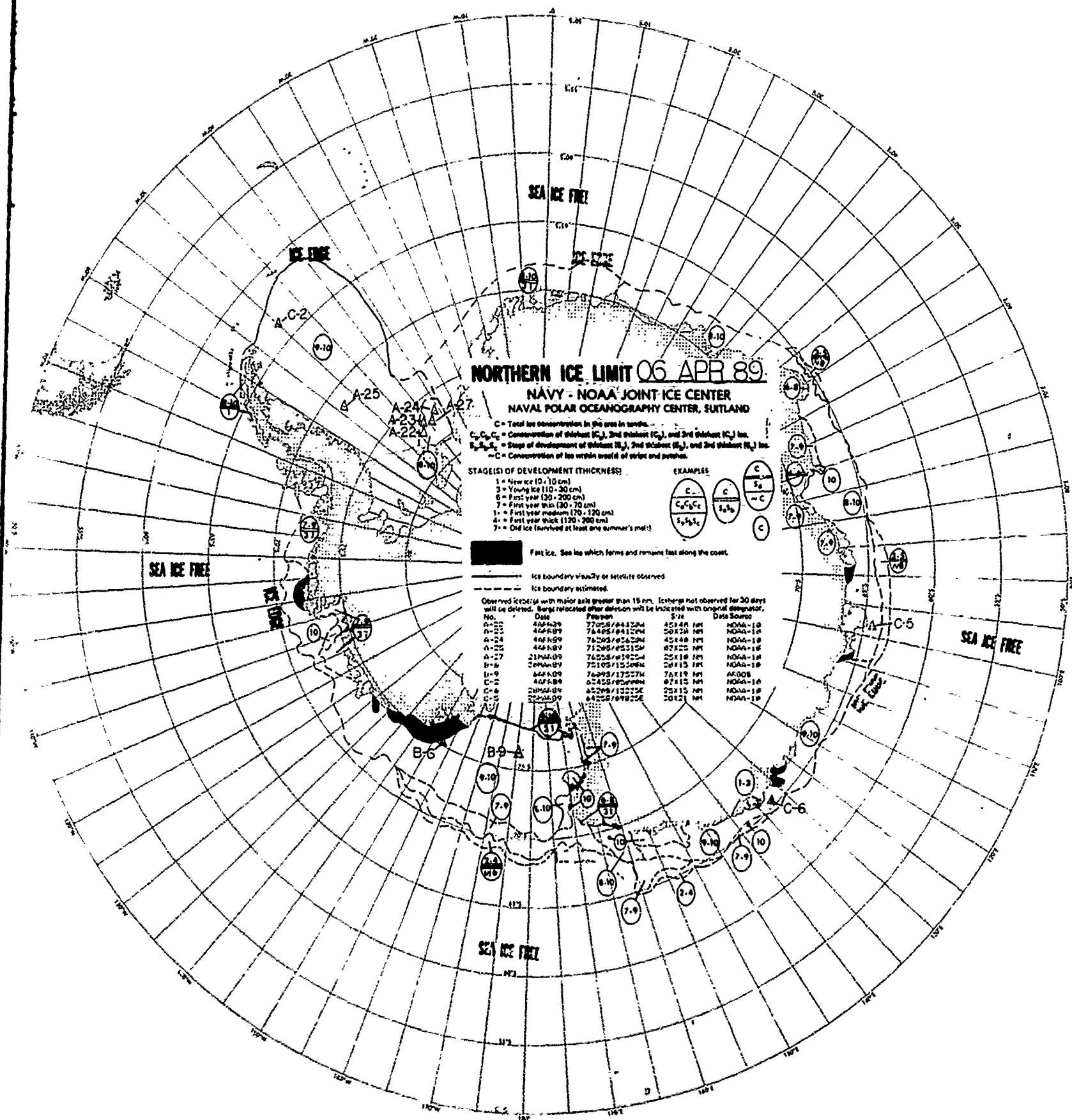
Fast ice. See ice when forms and remains fast along the coast.

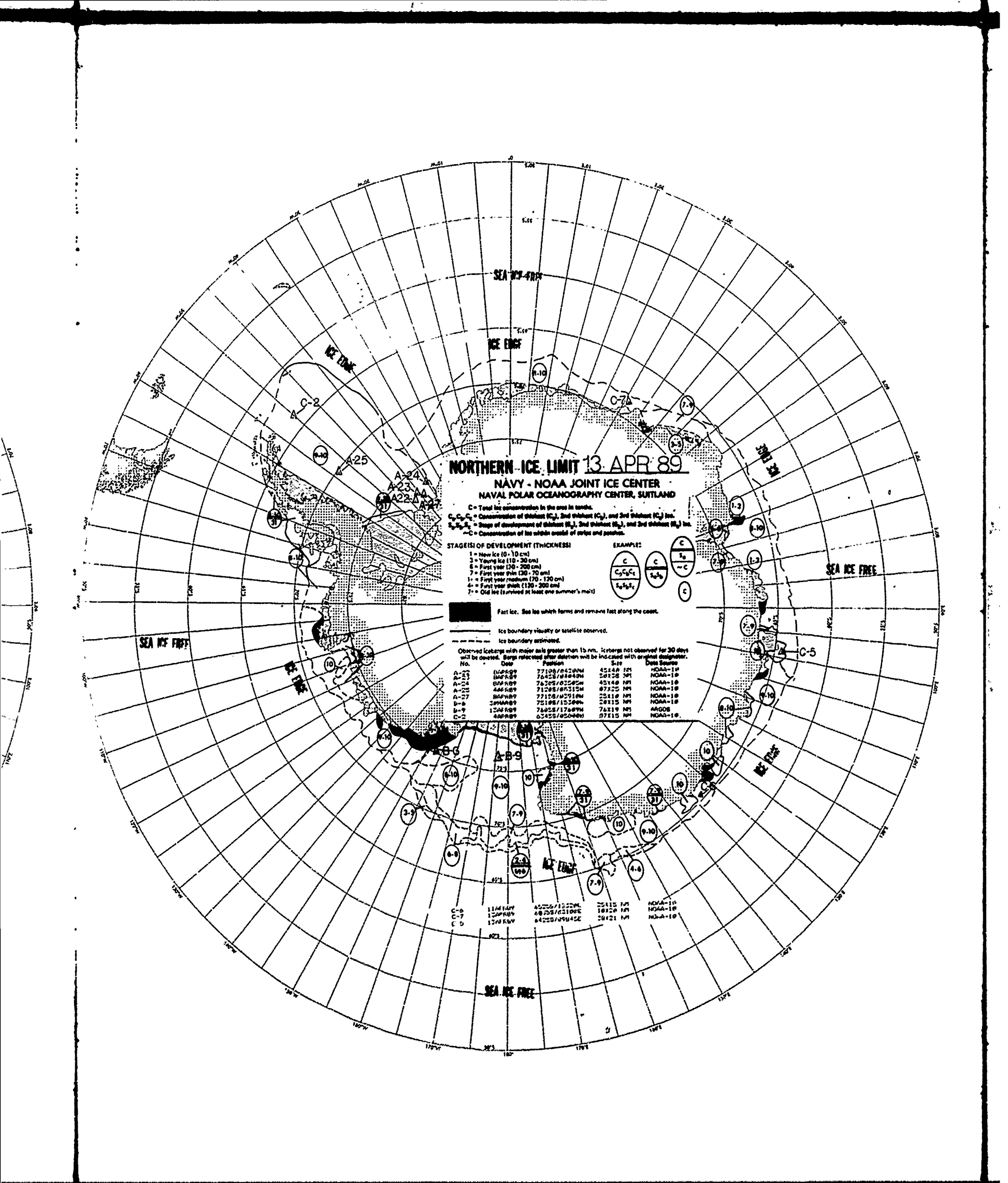
Ice boundary visually or satellite observed

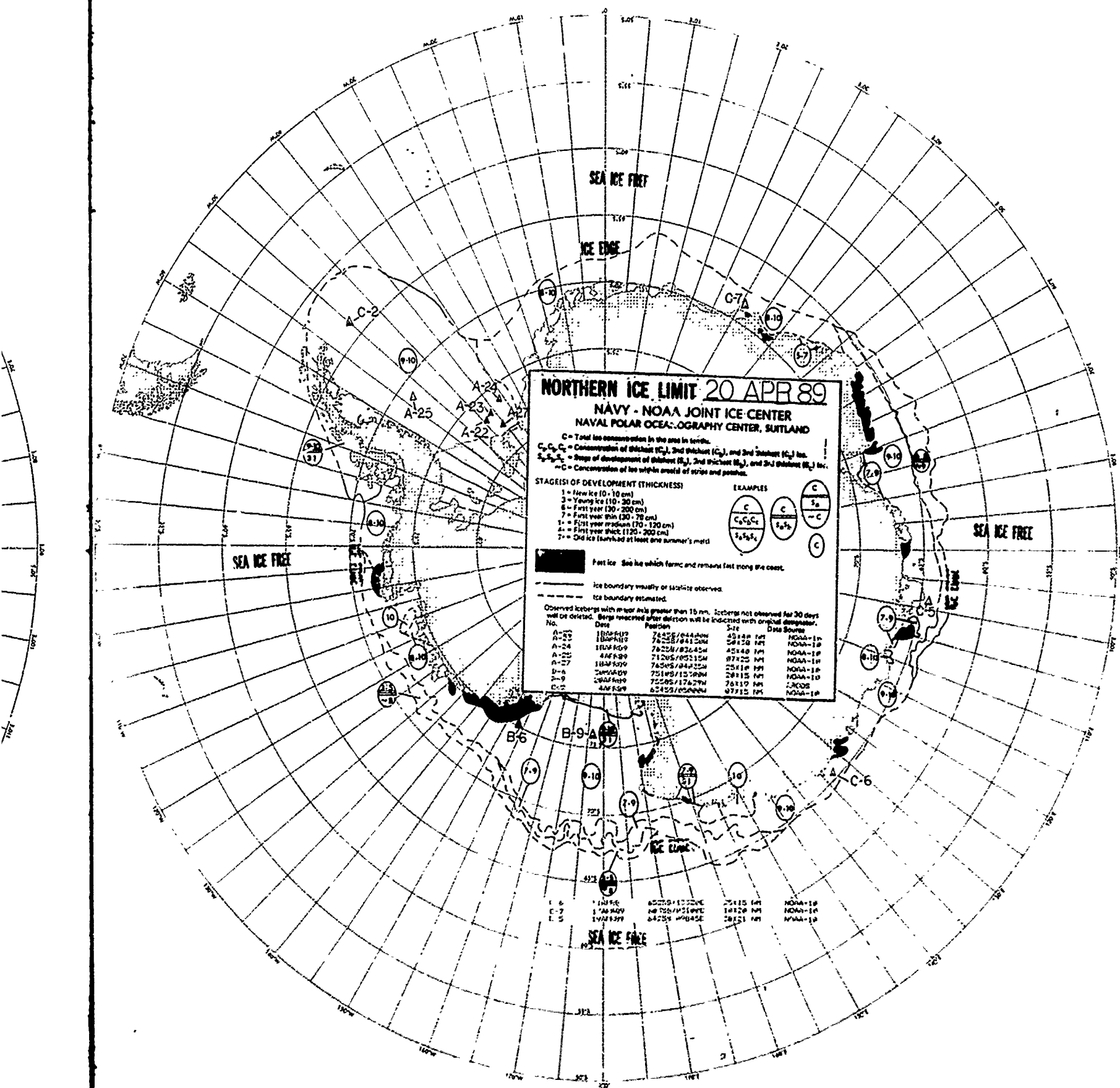
Ice boundary estimated.

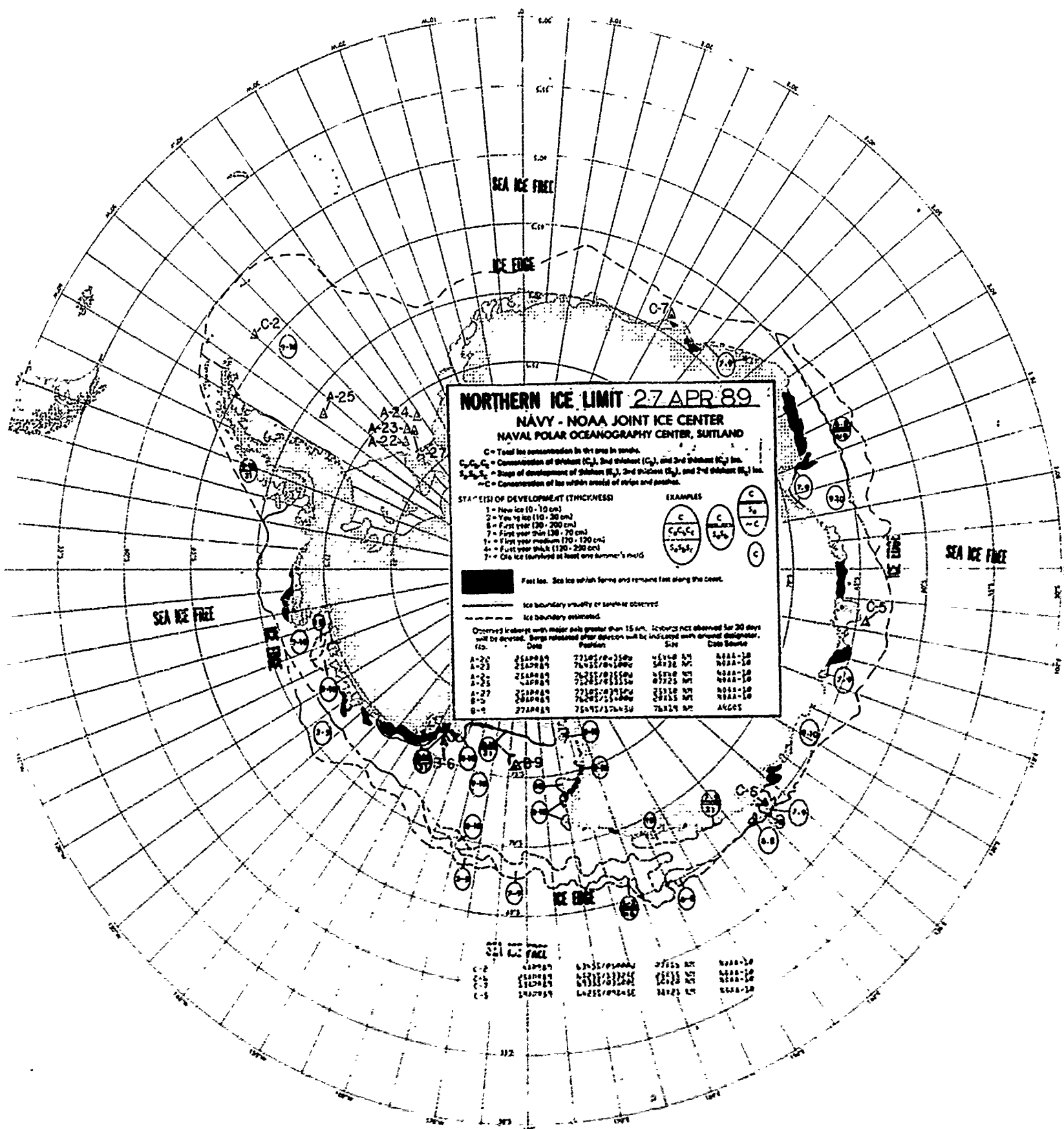
Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Bergs relocated after deletion will be indicated with original designator.

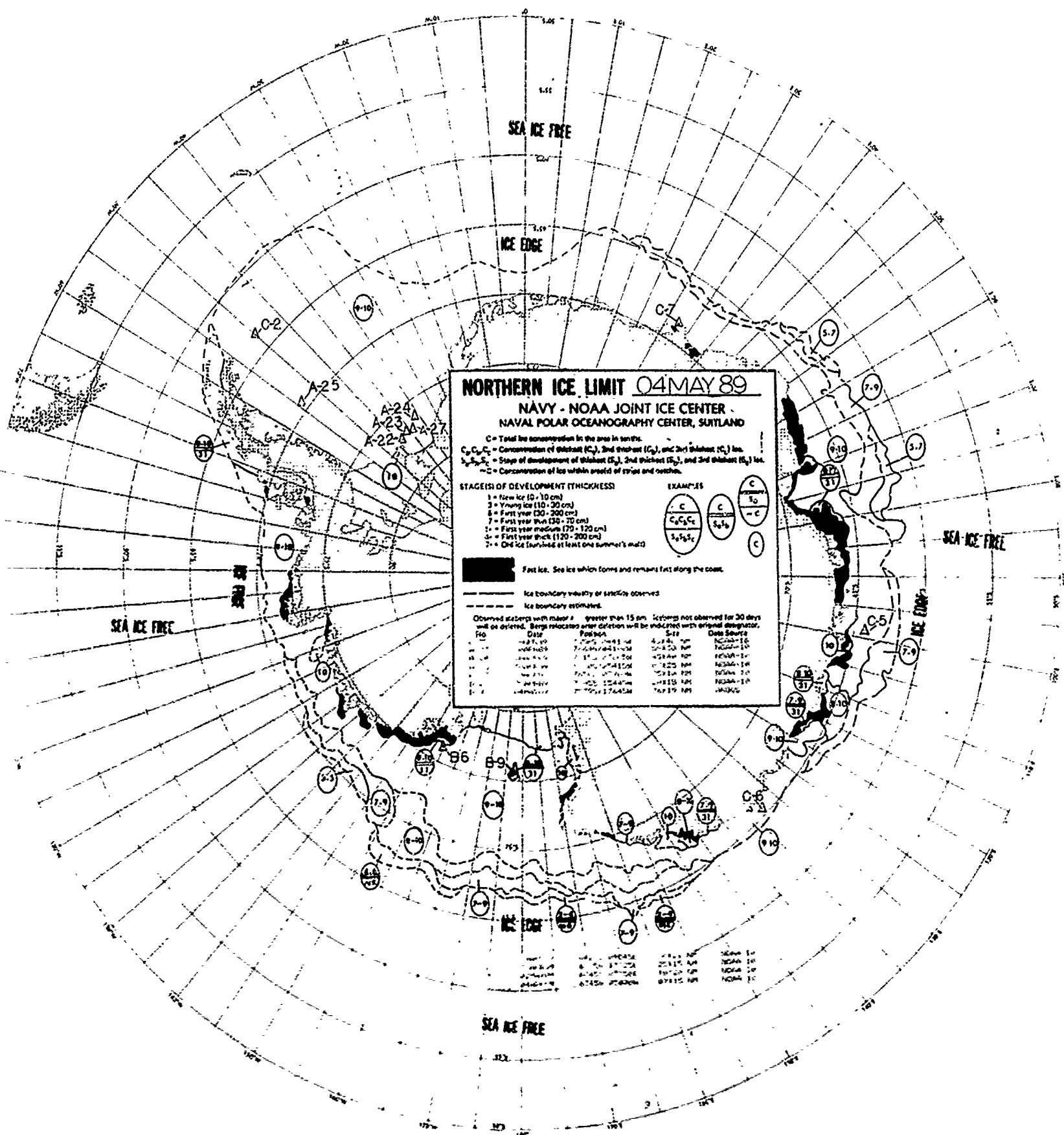
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A-24	27MAR89	74298/0352W	45148 NM	NOAA-18
A-25	23MAR89	72498/0552W	87125 NM	NOAA-18
A-27	21MAR89	74508/0392W	25118 NM	NOAA-18
B-6	18MAR89	75298/1560W	26115 NM	NOAA-18
B-9	20MAR89	74278/1754W	74119 NM	ARGOS
C-2	23MAR89	45558/0513W	87115 NM	NOAA-18
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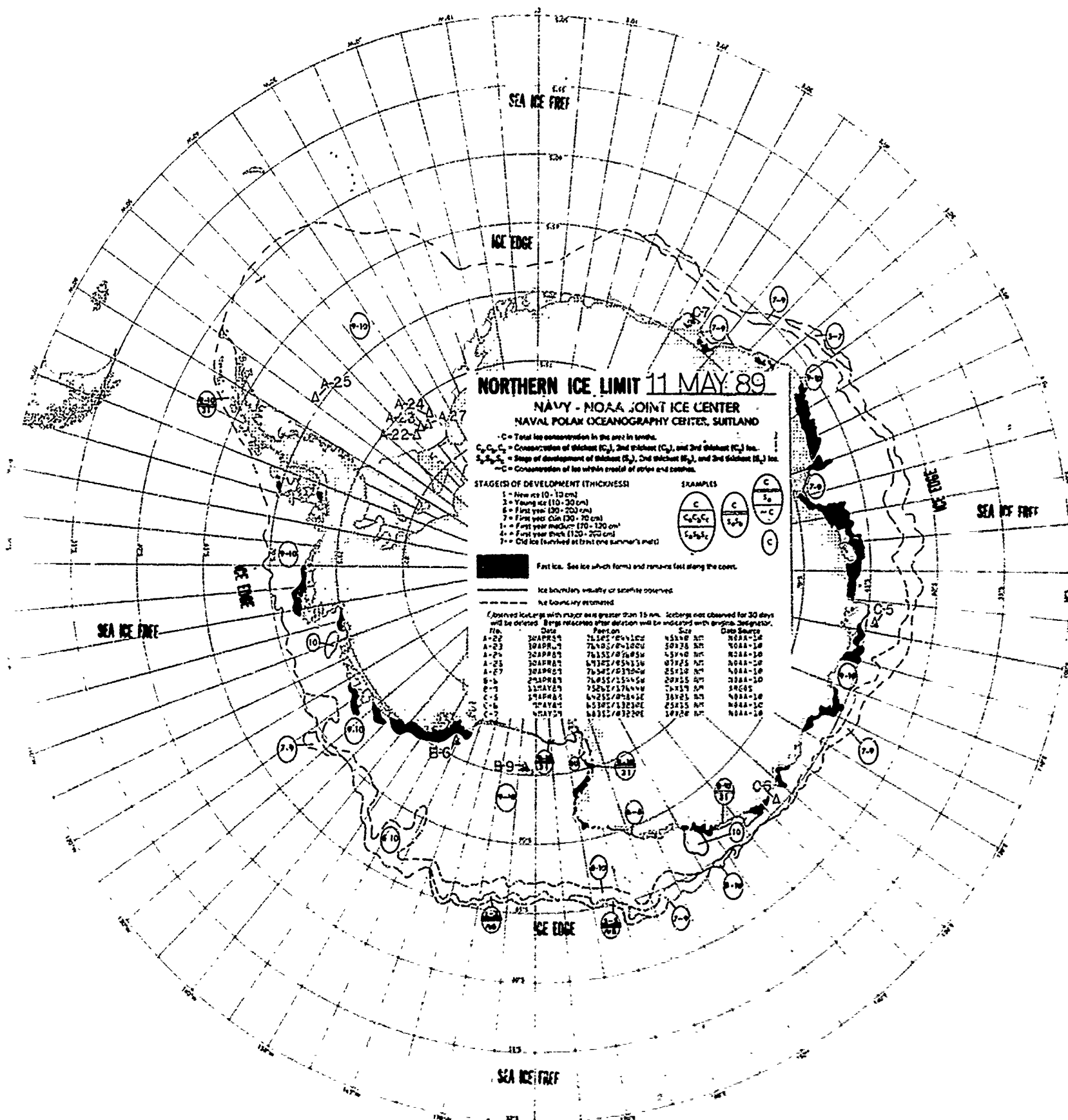












NORTHERN ICE LIMIT 11 MAY 89

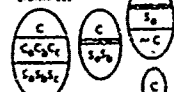
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUTLAND

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S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
C = Concentration of ice within coastal of slope and contour.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (10 - 12 cm)
- 2 = Young ice (12 - 20 cm)
- 3 = First year (20 - 30 cm)
- 4 = First year (30 - 40 cm)
- 5 = First year (40 - 50 cm)
- 6 = First year (50 - 60 cm)
- 7 = First year (60 - 70 cm)
- 8 = First year (70 - 80 cm)
- 9 = First year (80 - 90 cm)
- 10 = First year (90 - 100 cm)
- 11 = First year (100 - 120 cm)
- 12 = First year (120 - 140 cm)
- 13 = First year (140 - 160 cm)
- 14 = First year (160 - 180 cm)
- 15 = First year (180 - 200 cm)
- 16 = First year (200 - 220 cm)
- 17 = First year (220 - 240 cm)
- 18 = First year (240 - 260 cm)
- 19 = First year (260 - 280 cm)
- 20 = First year (280 - 300 cm)
- 21 = First year (300 - 320 cm)
- 22 = First year (320 - 340 cm)
- 23 = First year (340 - 360 cm)
- 24 = First year (360 - 380 cm)
- 25 = First year (380 - 400 cm)
- 26 = First year (400 - 420 cm)
- 27 = First year (420 - 440 cm)
- 28 = First year (440 - 460 cm)
- 29 = First year (460 - 480 cm)
- 30 = First year (480 - 500 cm)
- 31 = First year (500 - 520 cm)
- 32 = First year (520 - 540 cm)
- 33 = First year (540 - 560 cm)
- 34 = First year (560 - 580 cm)
- 35 = First year (580 - 600 cm)
- 36 = First year (600 - 620 cm)
- 37 = First year (620 - 640 cm)
- 38 = First year (640 - 660 cm)
- 39 = First year (660 - 680 cm)
- 40 = First year (680 - 700 cm)
- 41 = First year (700 - 720 cm)
- 42 = First year (720 - 740 cm)
- 43 = First year (740 - 760 cm)
- 44 = First year (760 - 780 cm)
- 45 = First year (780 - 800 cm)
- 46 = First year (800 - 820 cm)
- 47 = First year (820 - 840 cm)
- 48 = First year (840 - 860 cm)
- 49 = First year (860 - 880 cm)
- 50 = First year (880 - 900 cm)
- 51 = First year (900 - 920 cm)
- 52 = First year (920 - 940 cm)
- 53 = First year (940 - 960 cm)
- 54 = First year (960 - 980 cm)
- 55 = First year (980 - 1000 cm)
- 56 = First year (1000 - 1020 cm)
- 57 = First year (1020 - 1040 cm)
- 58 = First year (1040 - 1060 cm)
- 59 = First year (1060 - 1080 cm)
- 60 = First year (1080 - 1100 cm)
- 61 = First year (1100 - 1120 cm)
- 62 = First year (1120 - 1140 cm)
- 63 = First year (1140 - 1160 cm)
- 64 = First year (1160 - 1180 cm)
- 65 = First year (1180 - 1200 cm)
- 66 = First year (1200 - 1220 cm)
- 67 = First year (1220 - 1240 cm)
- 68 = First year (1240 - 1260 cm)
- 69 = First year (1260 - 1280 cm)
- 70 = First year (1280 - 1300 cm)
- 71 = First year (1300 - 1320 cm)
- 72 = First year (1320 - 1340 cm)
- 73 = First year (1340 - 1360 cm)
- 74 = First year (1360 - 1380 cm)
- 75 = First year (1380 - 1400 cm)
- 76 = First year (1400 - 1420 cm)
- 77 = First year (1420 - 1440 cm)
- 78 = First year (1440 - 1460 cm)
- 79 = First year (1460 - 1480 cm)
- 80 = First year (1480 - 1500 cm)
- 81 = First year (1500 - 1520 cm)
- 82 = First year (1520 - 1540 cm)
- 83 = First year (1540 - 1560 cm)
- 84 = First year (1560 - 1580 cm)
- 85 = First year (1580 - 1600 cm)
- 86 = First year (1600 - 1620 cm)
- 87 = First year (1620 - 1640 cm)
- 88 = First year (1640 - 1660 cm)
- 89 = First year (1660 - 1680 cm)
- 90 = First year (1680 - 1700 cm)
- 91 = First year (1700 - 1720 cm)
- 92 = First year (1720 - 1740 cm)
- 93 = First year (1740 - 1760 cm)
- 94 = First year (1760 - 1780 cm)
- 95 = First year (1780 - 1800 cm)
- 96 = First year (1800 - 1820 cm)
- 97 = First year (1820 - 1840 cm)
- 98 = First year (1840 - 1860 cm)
- 99 = First year (1860 - 1880 cm)
- 100 = First year (1880 - 1900 cm)

EXAMPLES

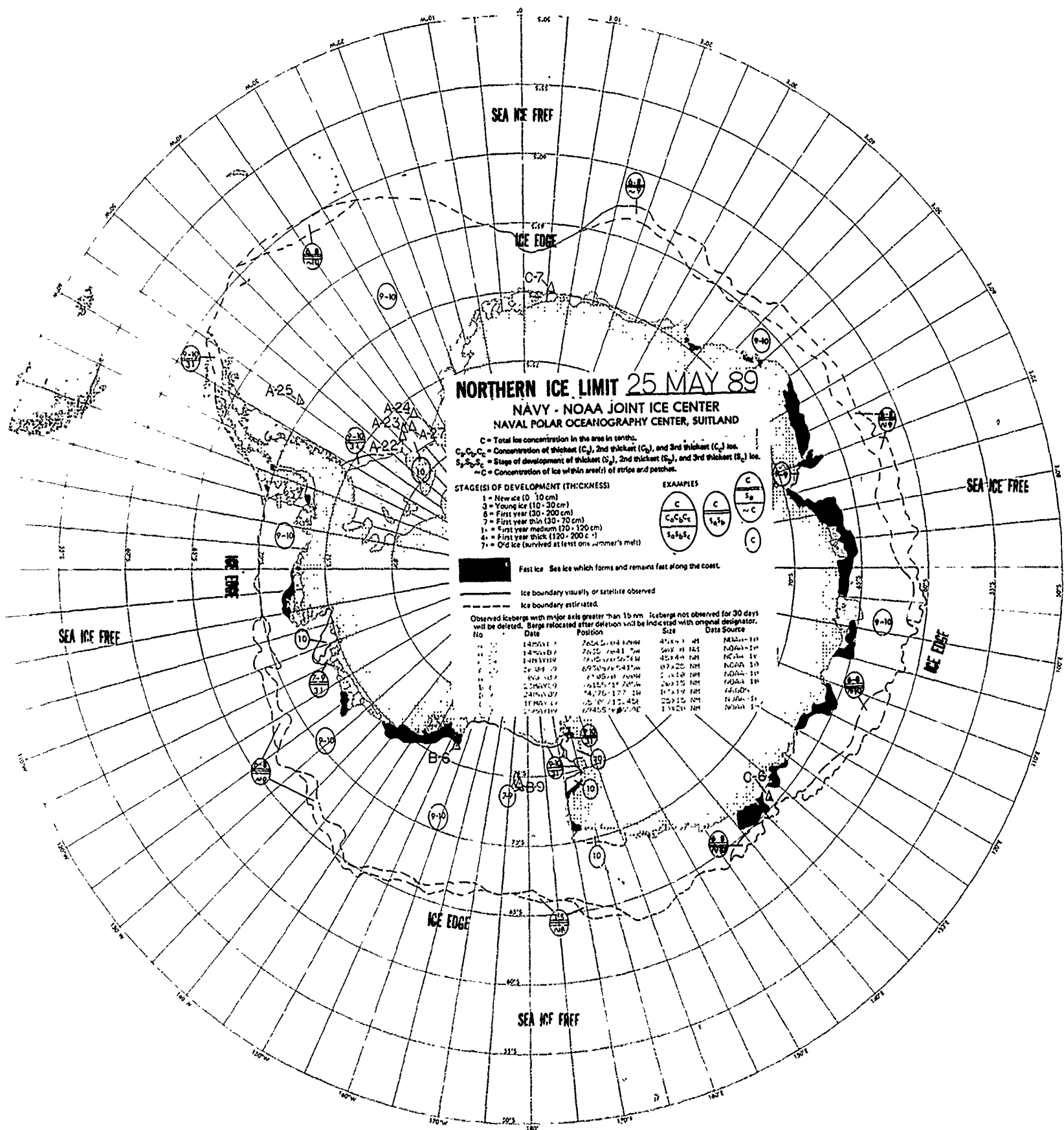


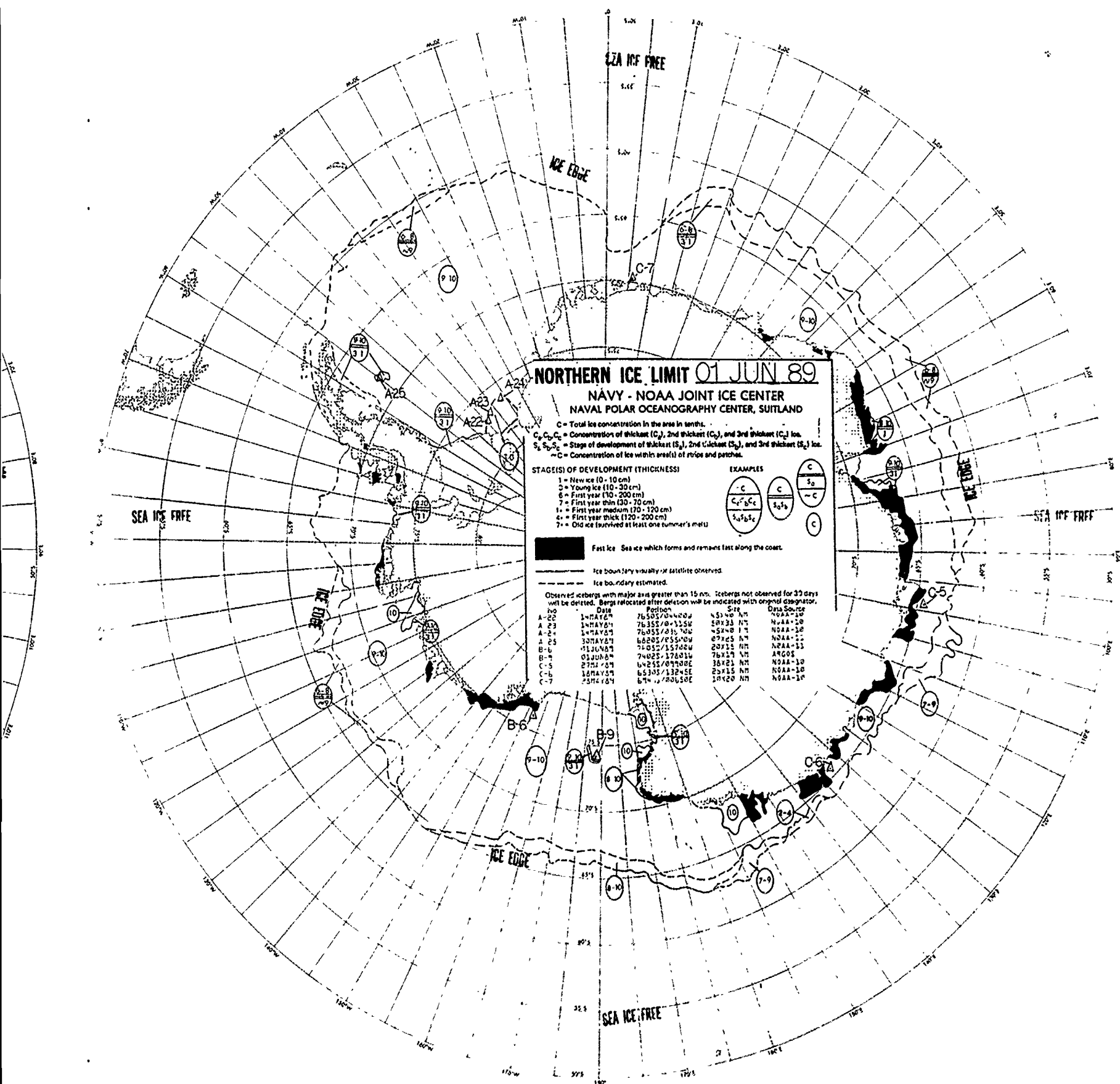
First ice. See ice which forms and remains fast along the coast.

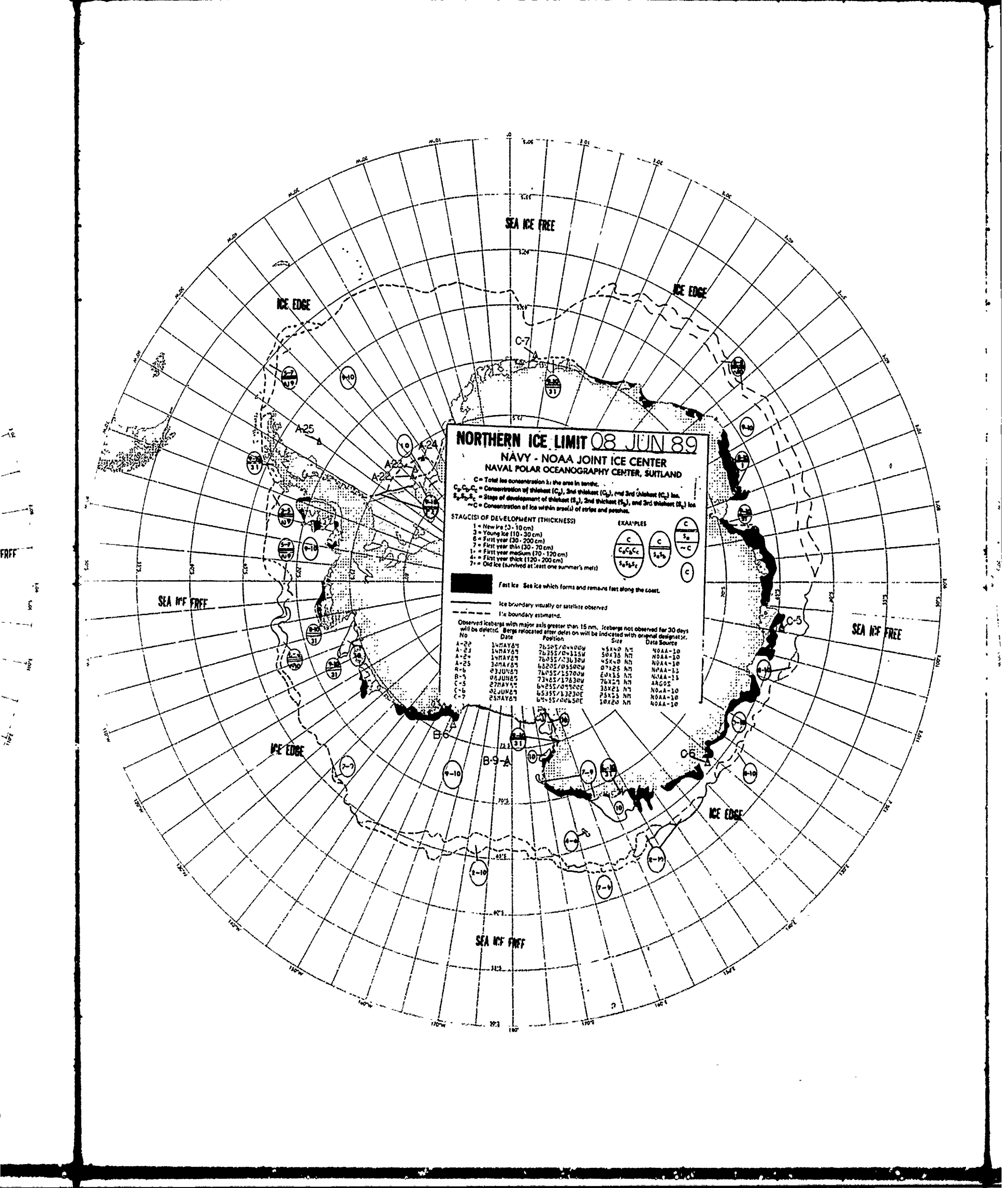
Ice boundary visually or satellite observed.
Ice boundary estimated.

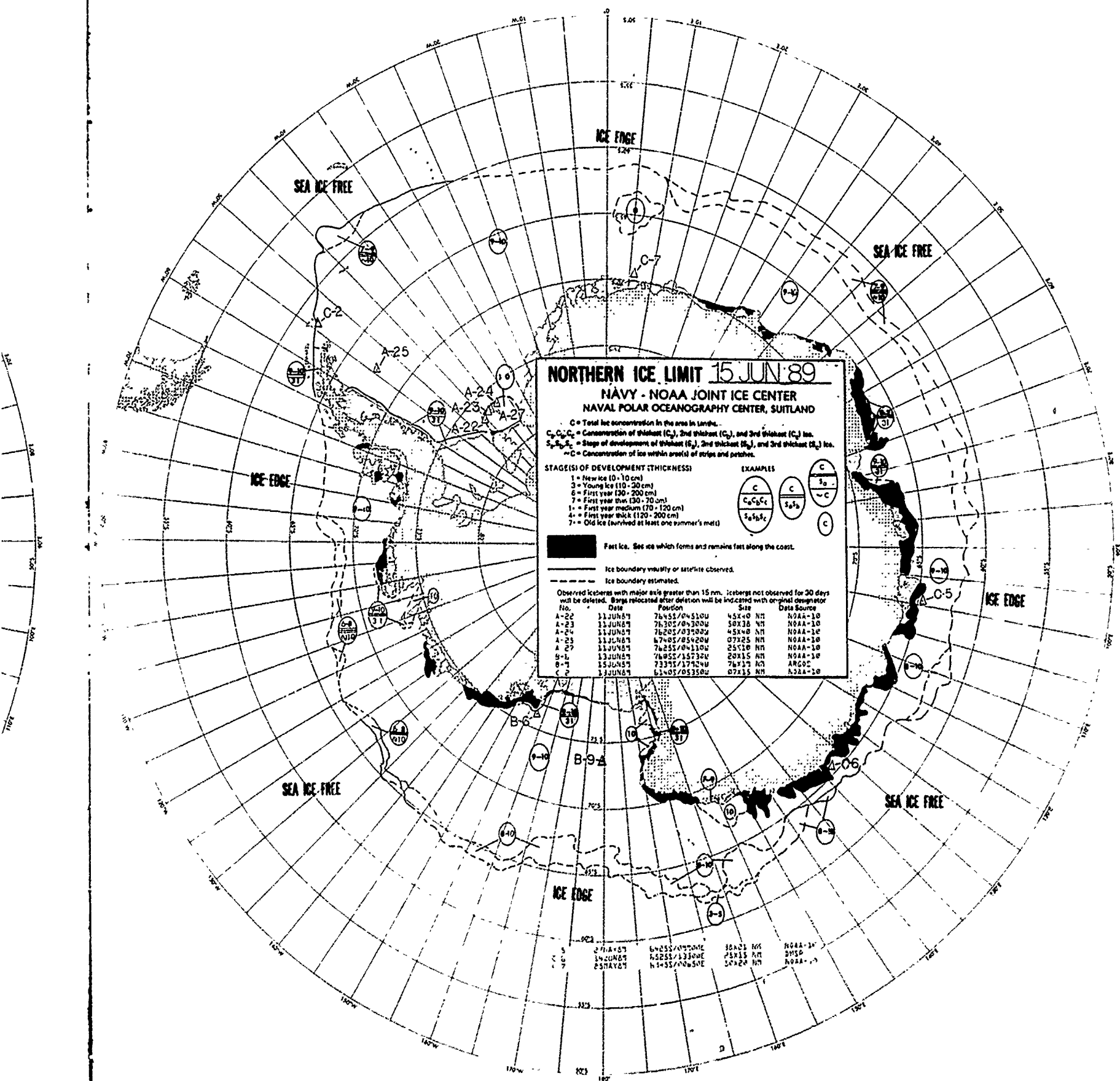
Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Berge released after deletion will be indicated with original designation.

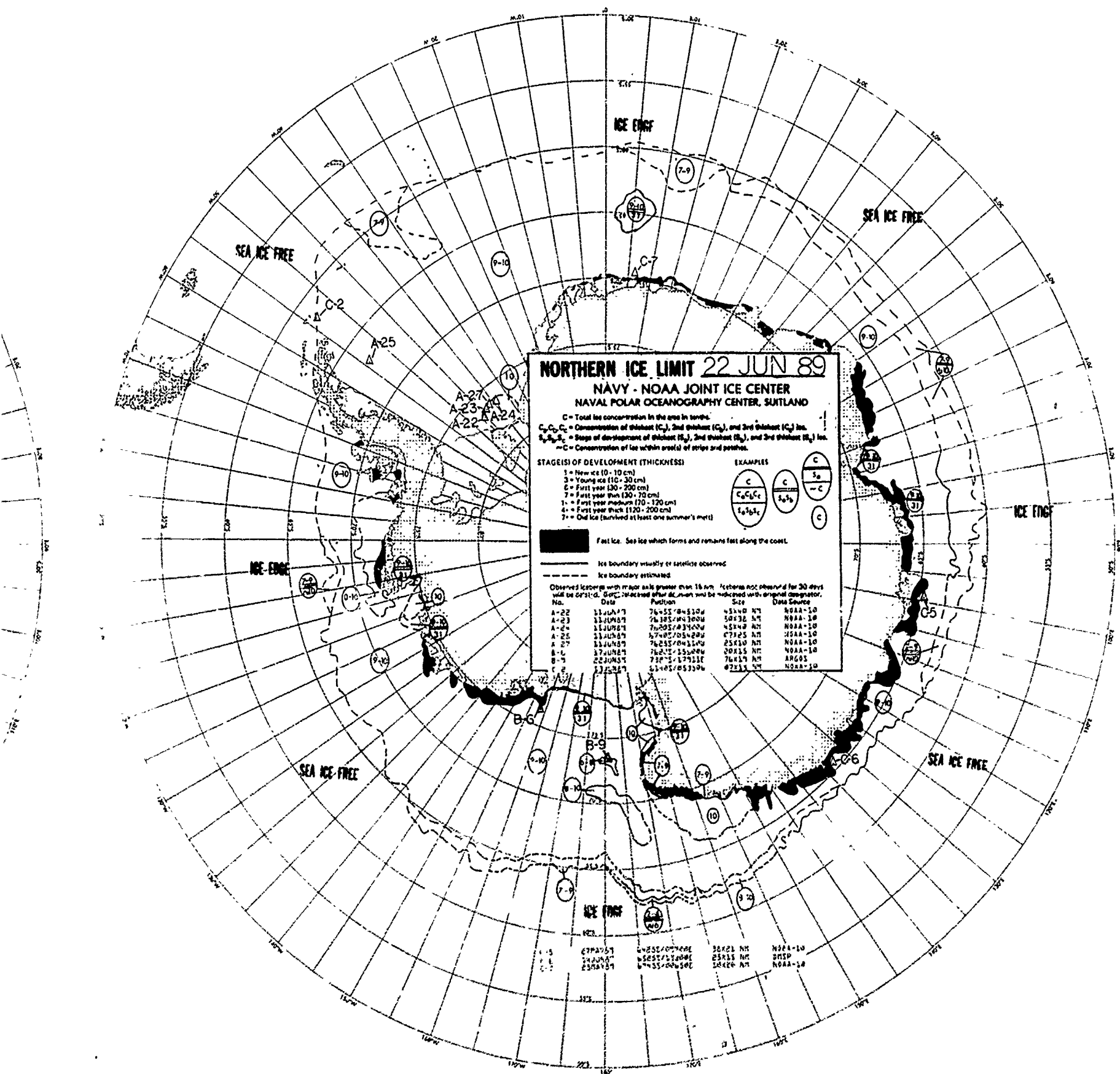
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A-24	30 APR 89	76 105 / 05 41 00	15300 NM	NOAA-10
A-25	30 APR 89	76 105 / 05 41 00	15300 NM	NOAA-10
A-26	30 APR 89	76 105 / 05 41 00	15300 NM	NOAA-10
A-27	30 APR 89	76 105 / 05 41 00	15300 NM	NOAA-10
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B-7	29 APR 89	76 055 / 05 41 00	25120 NM	NOAA-10
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C-85	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-86	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-87	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-88	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-89	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-90	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-91	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-92	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-93	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-94	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-95	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-96	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-97	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-98	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-99	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10
C-100	12 MAY 89	76 055 / 05 41 00	25120 NM	NOAA-10

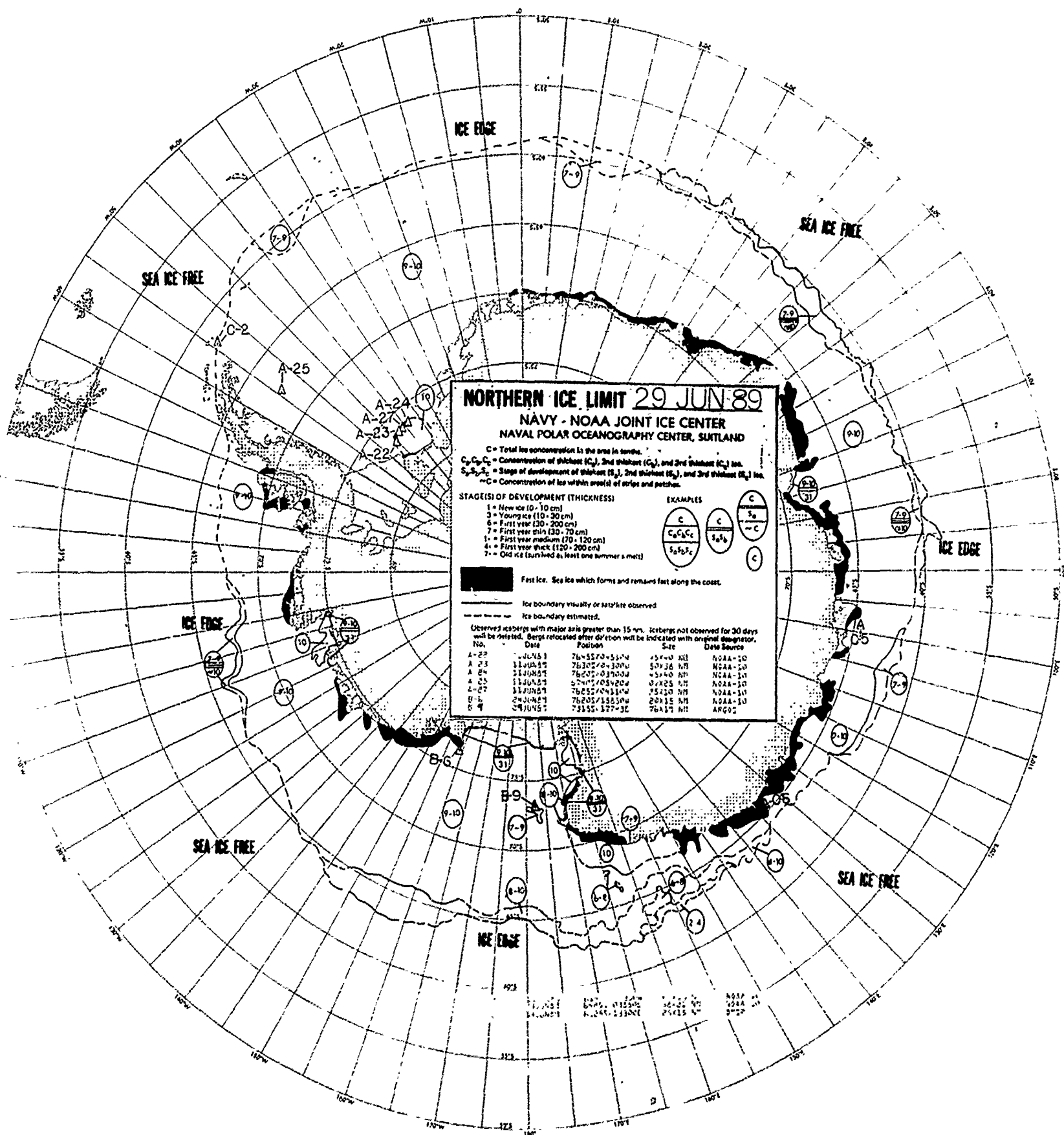


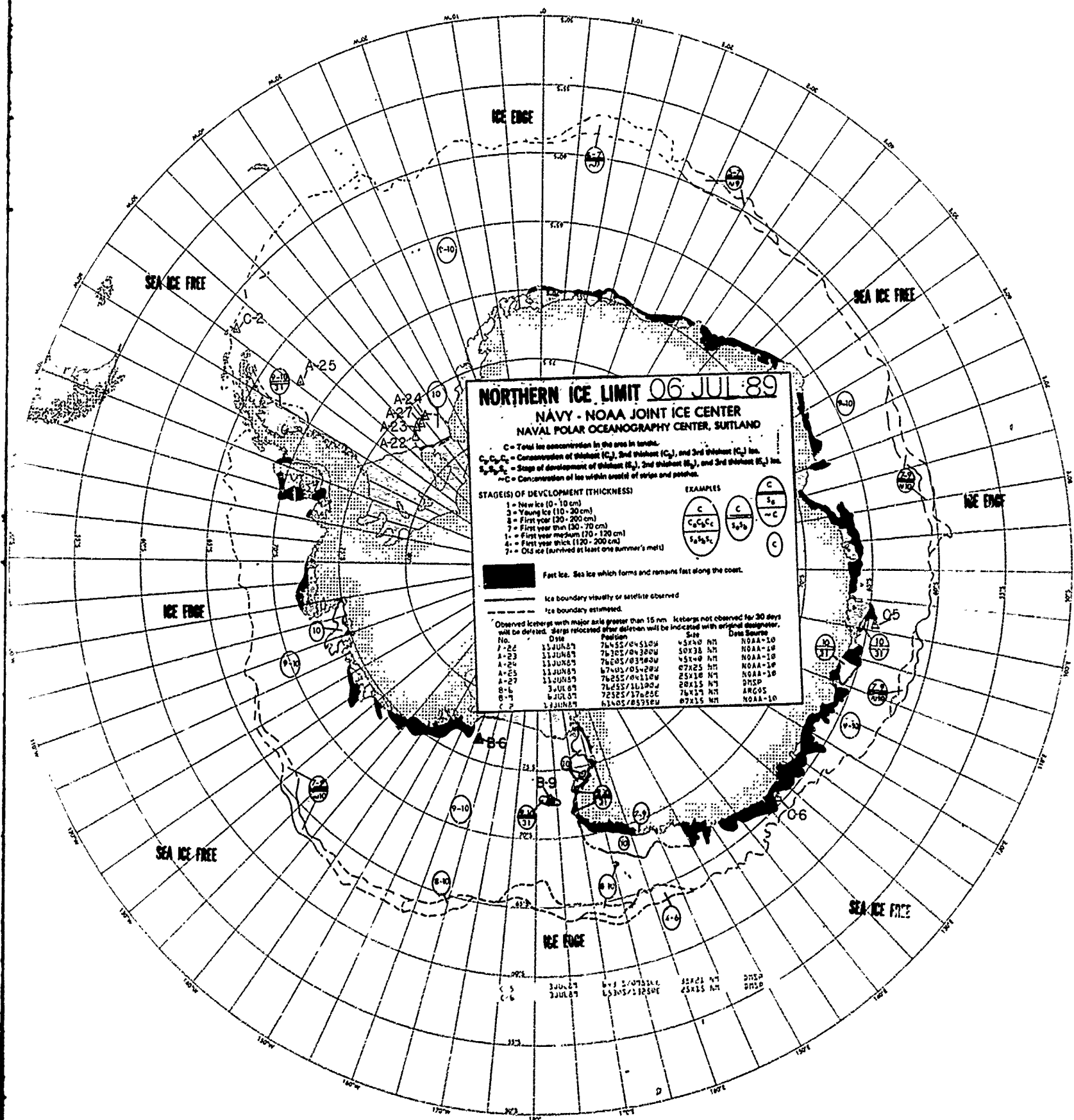


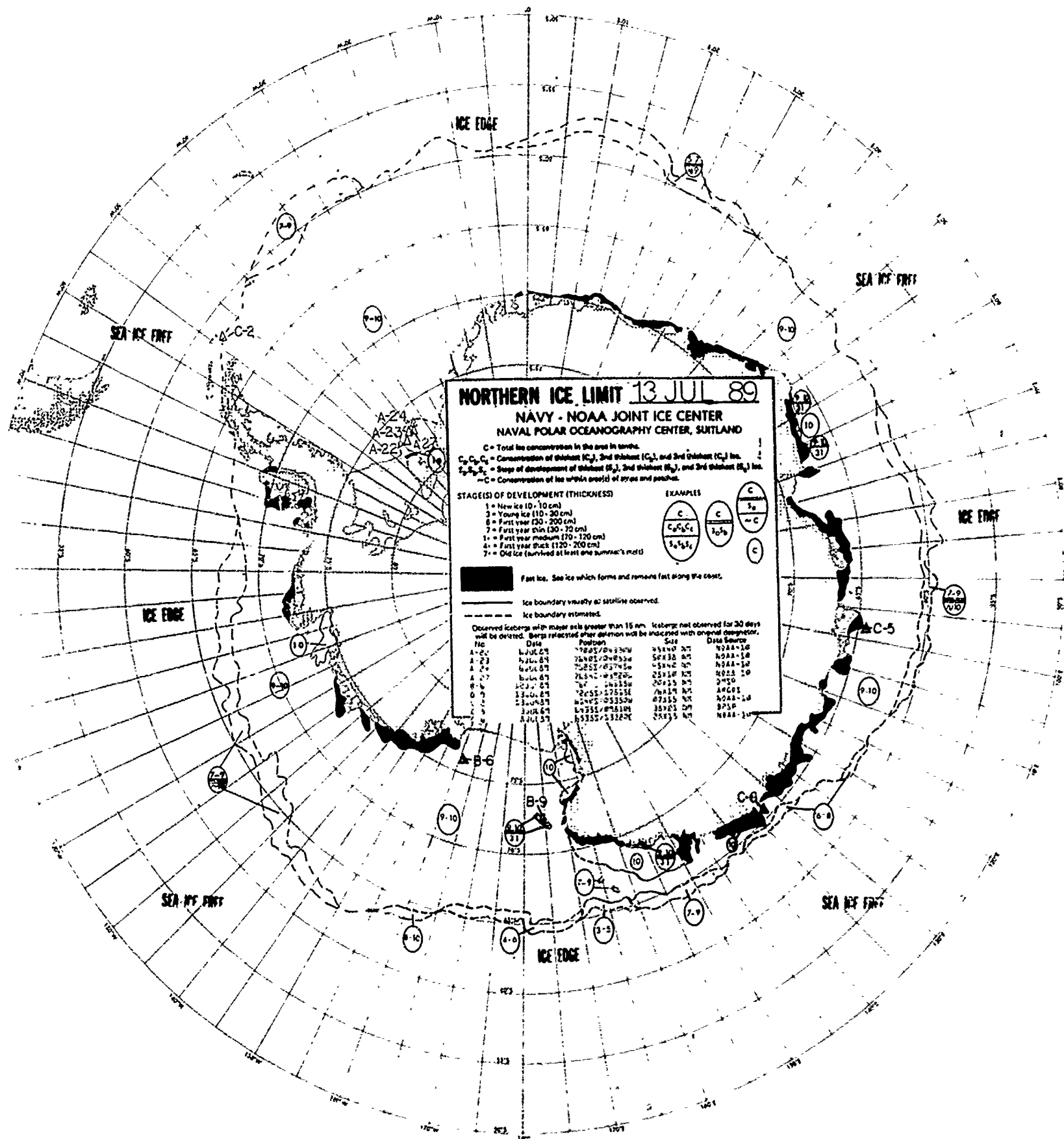


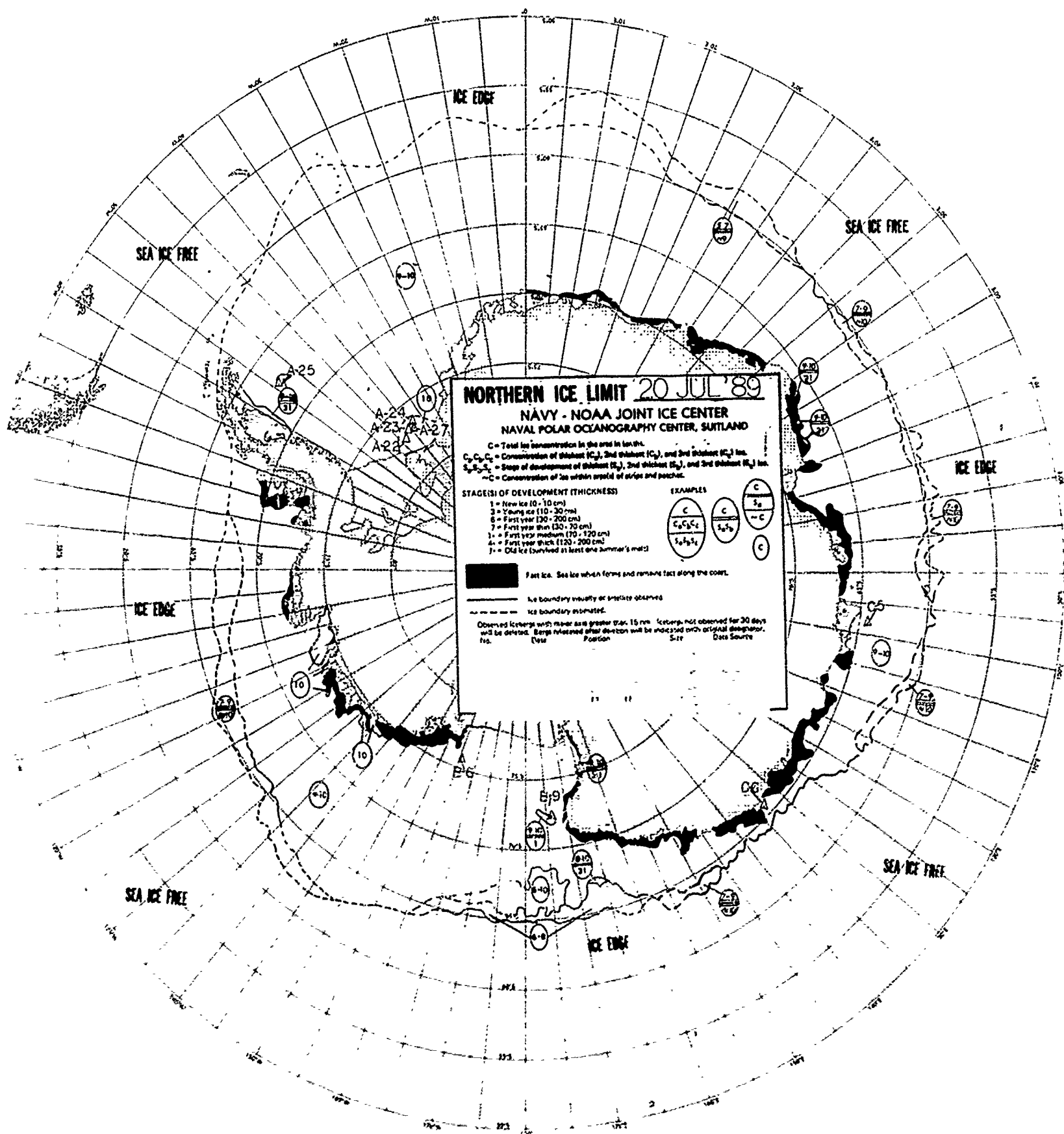


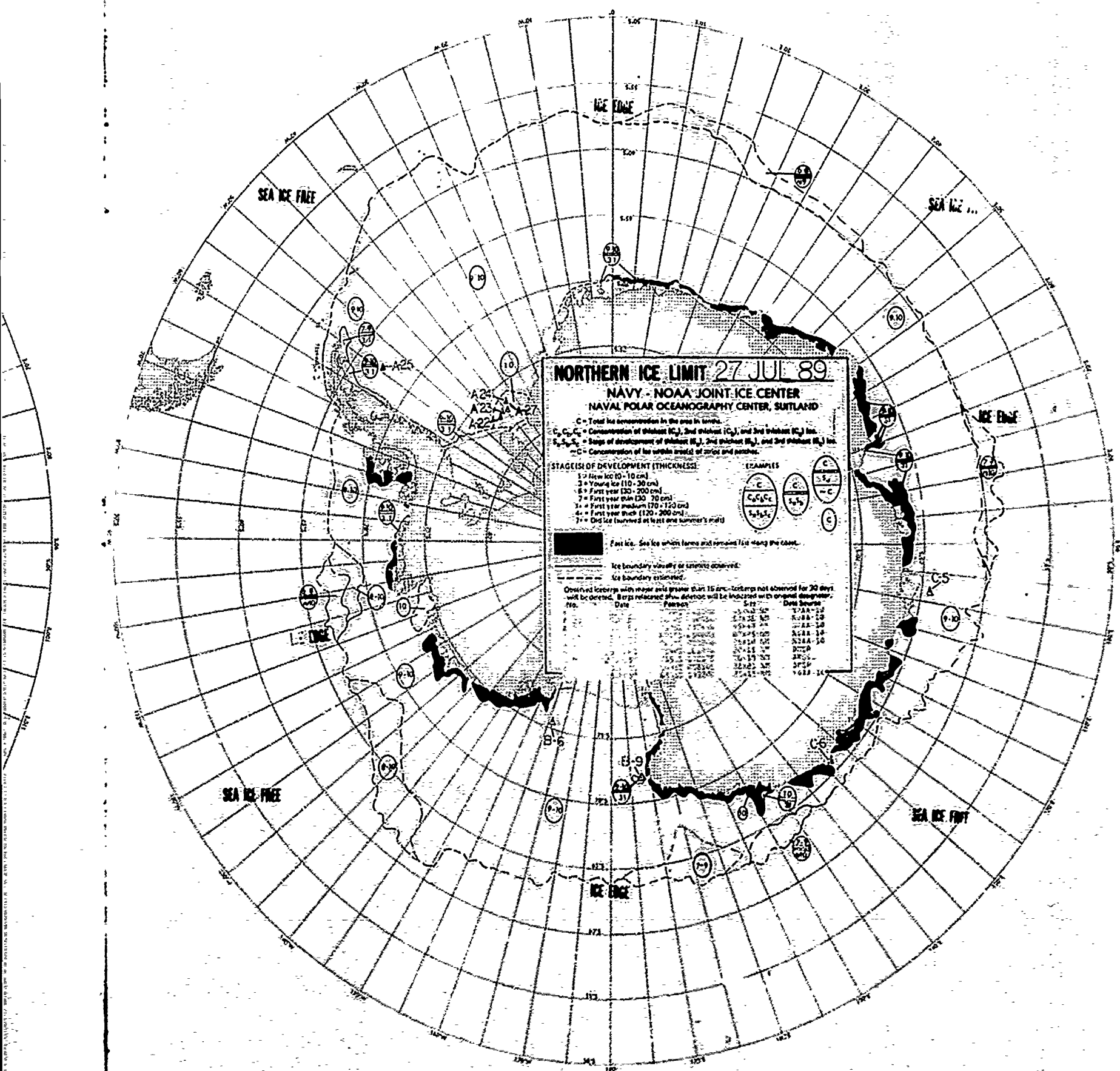


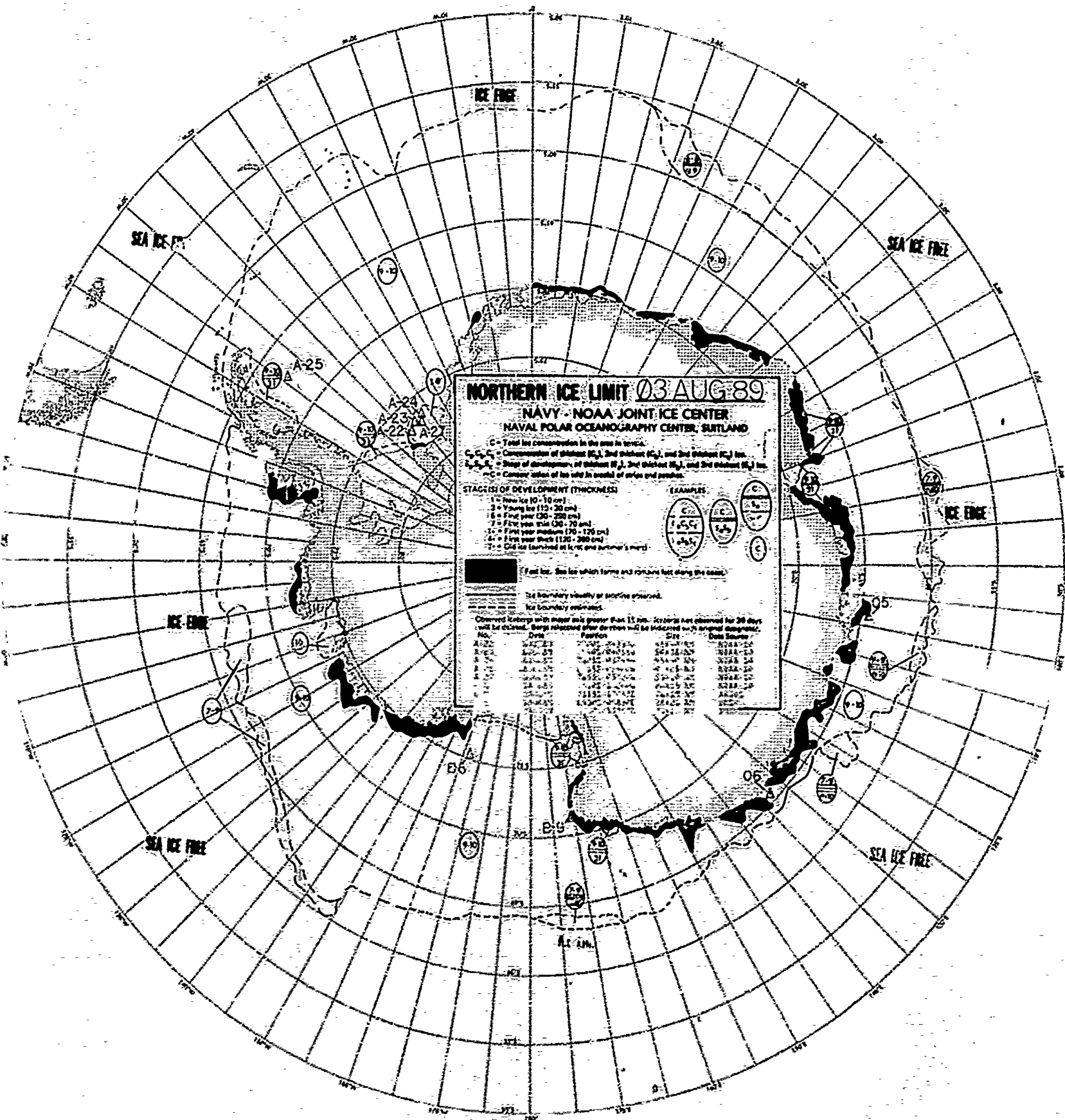


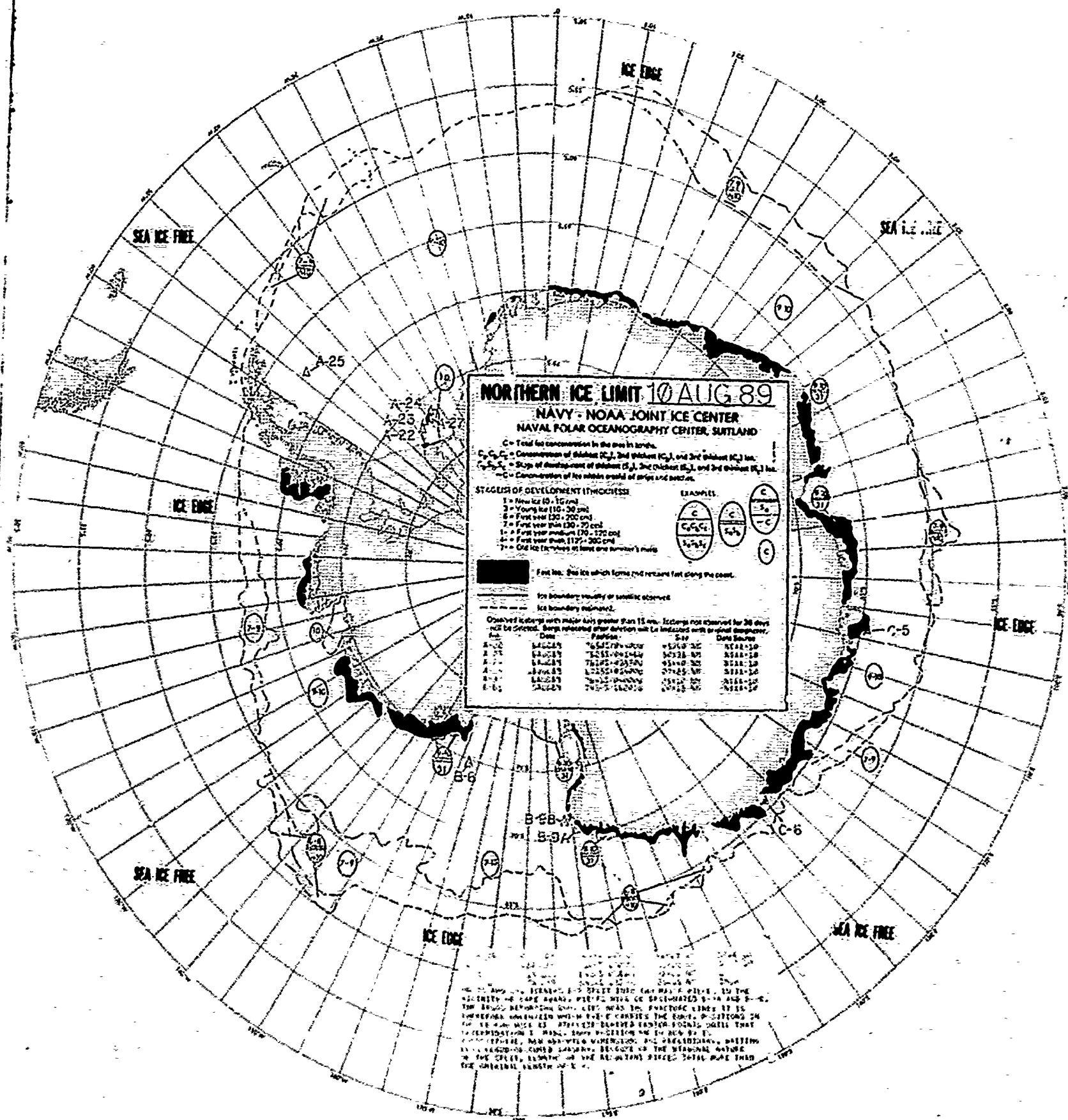


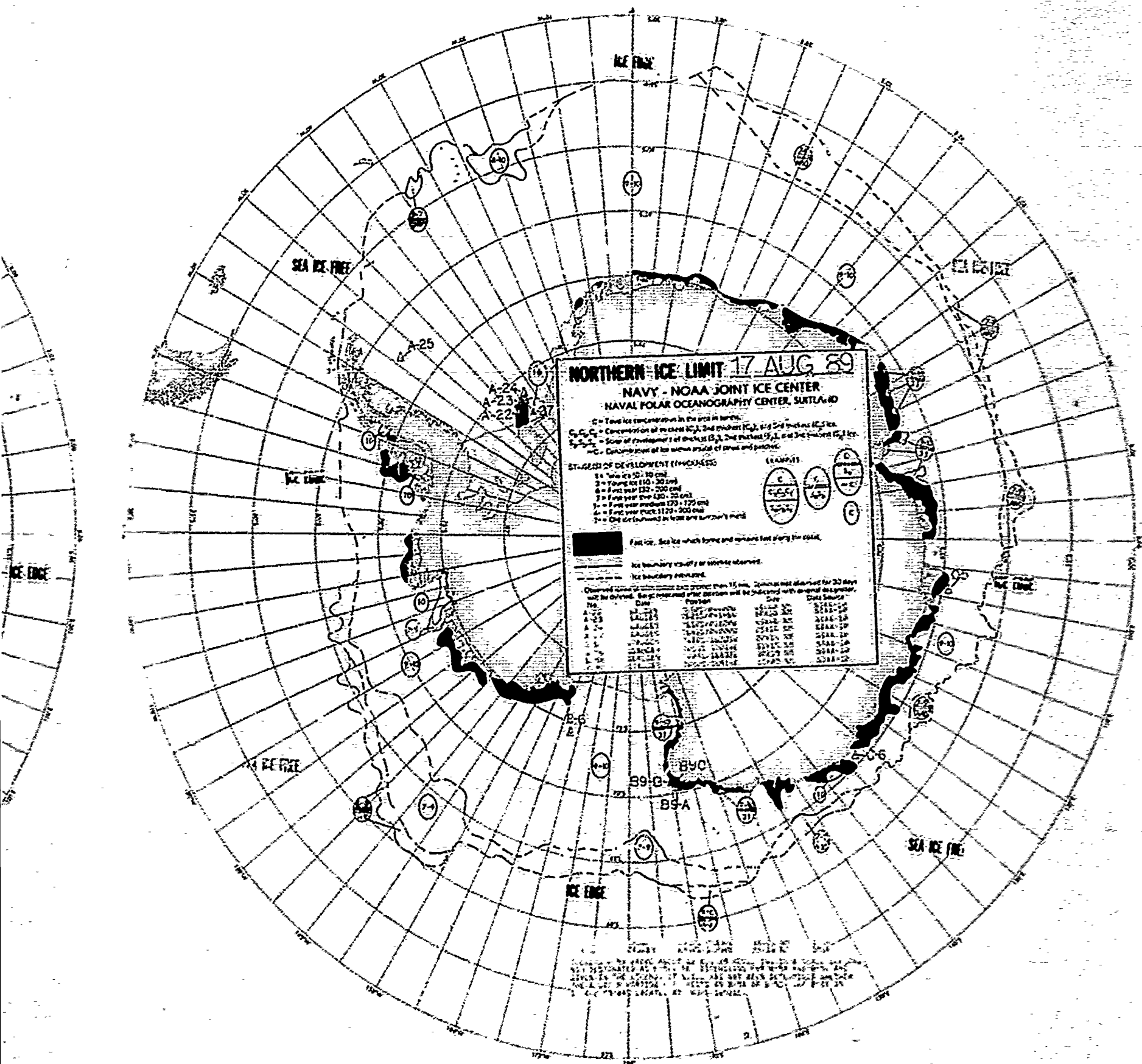


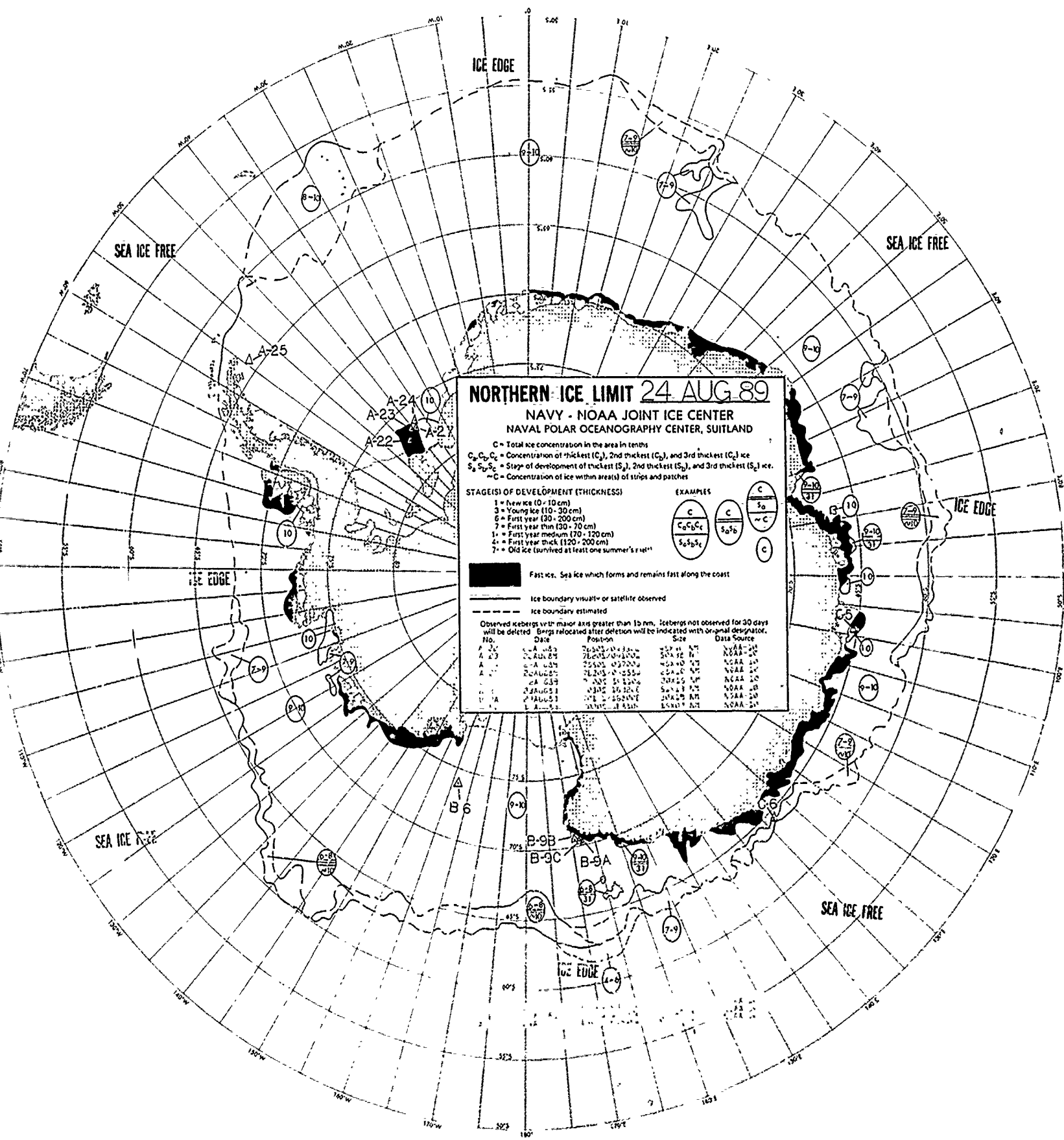












NORTHERN ICE LIMIT 24 AUG 89

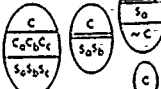
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths
 C_1, C_2, C_3 = Concentration of thickest (C_1), 2nd thickest (C_2), and 3rd thickest (C_3) ice
 S_1, S_2, S_3 = Stage of development of thickest (S_1), 2nd thickest (S_2), and 3rd thickest (S_3) ice.
 -C = Concentration of ice within area(s) of strips and patches

STAGE(S) OF DEVELOPMENT (THICKNESS)

- 1 = New ice (10 - 10 cm)
- 3 = Young ice (10 - 30 cm)
- 6 = First year (30 - 200 cm)
- 7 = First year thin (30 - 70 cm)
- 1 = First year medium (70 - 120 cm)
- 4 = First year thick (120 - 200 cm)
- 7 = Old ice (survived at least one summer's melt)

EXAMPLES



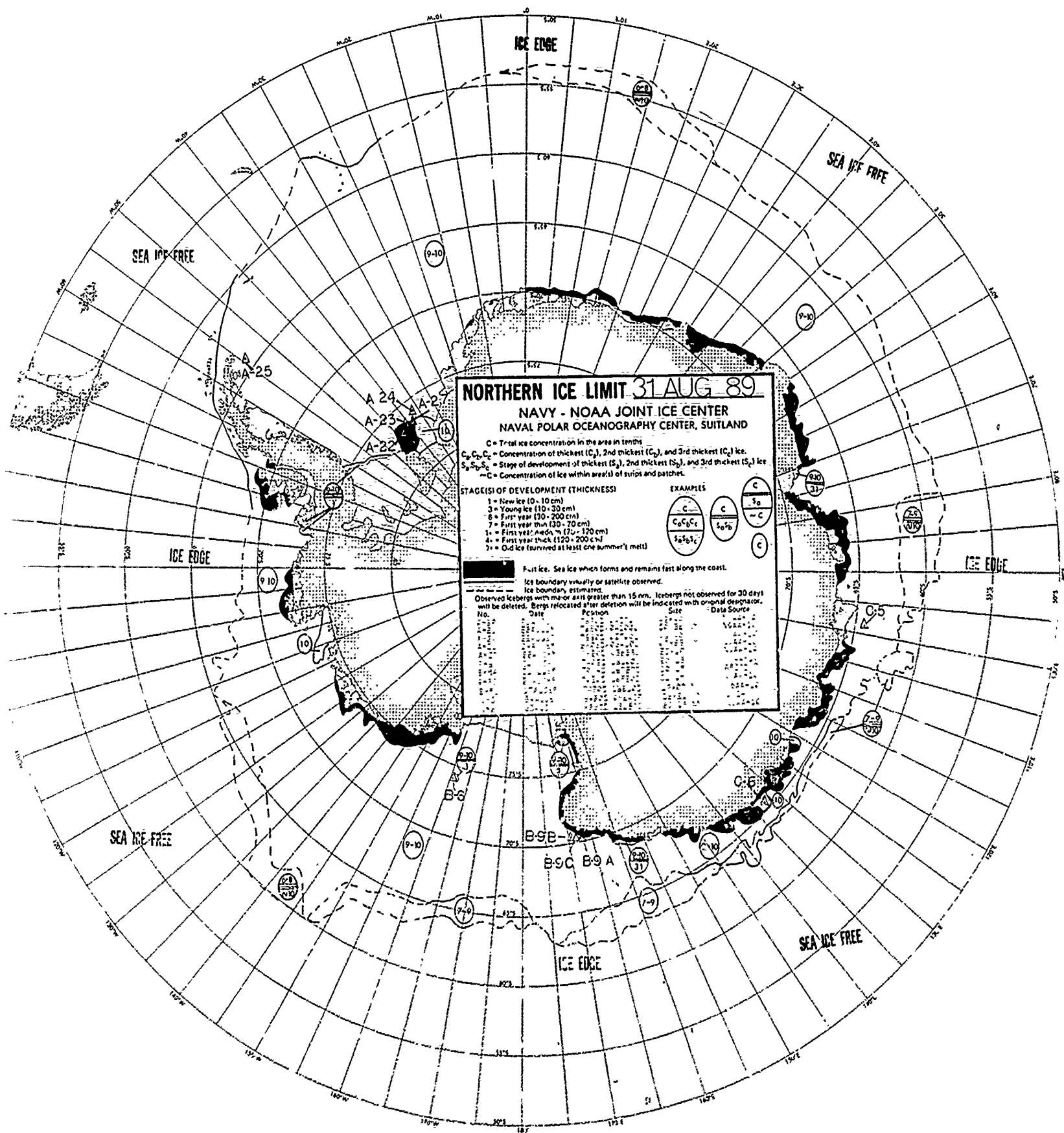
Fast ice. Sea ice which forms and remains fast along the coast

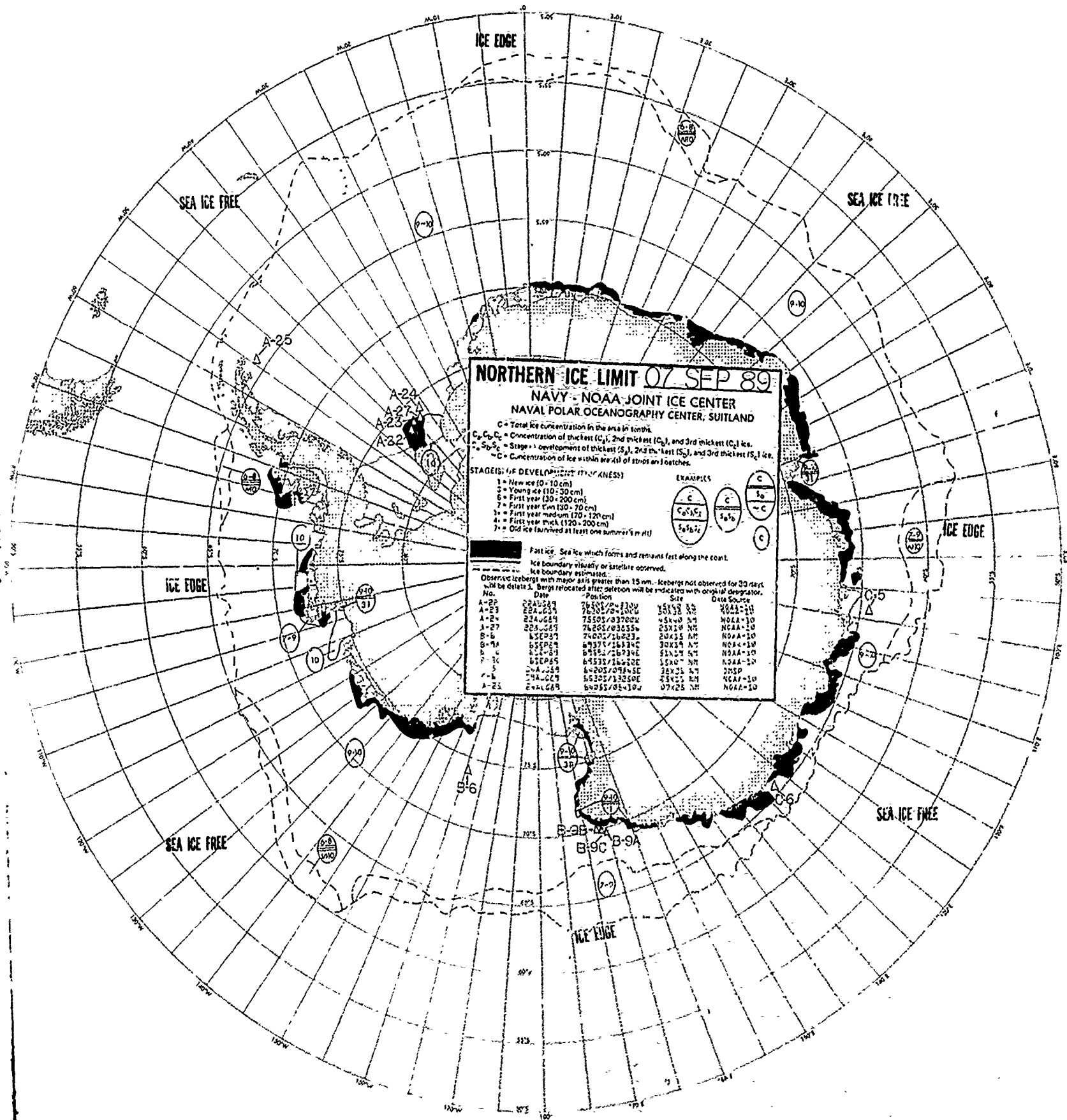
Ice boundary visual or satellite observed

Ice boundary estimated

Observed icebergs with major axis greater than 10 nm. Icebergs not observed for 30 days will be deleted. Bergs relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-22	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
A-23	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
A-24	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
A-25	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
B-6	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
B-9B	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
B-9C	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
B-9A	24 AUG 89	71.50N 15.00W	250 x 100	NOAA
B-9	24 AUG 89	71.50N 15.00W	250 x 100	NOAA





NORTHERN ICE LIMIT 07 SEP 89

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
 C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 S₁, S₂, S₃ = Stage 1 development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
 C = Concentration of ice within area(s) of strips and latches.

STAGES OF DEVELOPMENT (AKN/SS)

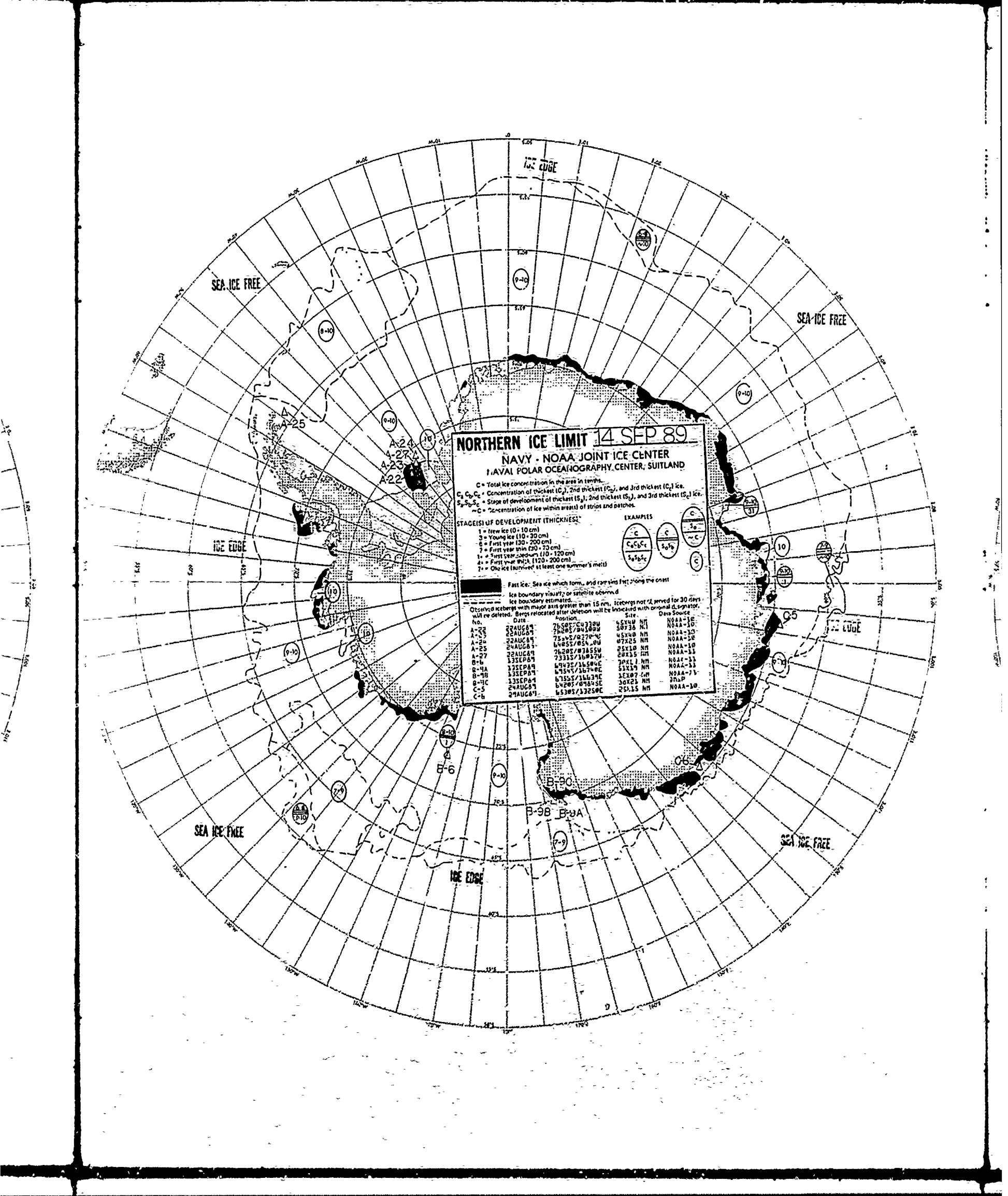
- 1 = New ice (0-10 cm)
- 2 = Young ice (10-30 cm)
- 3 = First year (30-200 cm)
- 4 = First year thin (20-70 cm)
- 5 = First year medium (70-120 cm)
- 6 = First year thick (120-200 cm)
- 7 = Old ice (survived at least one summer's melt)

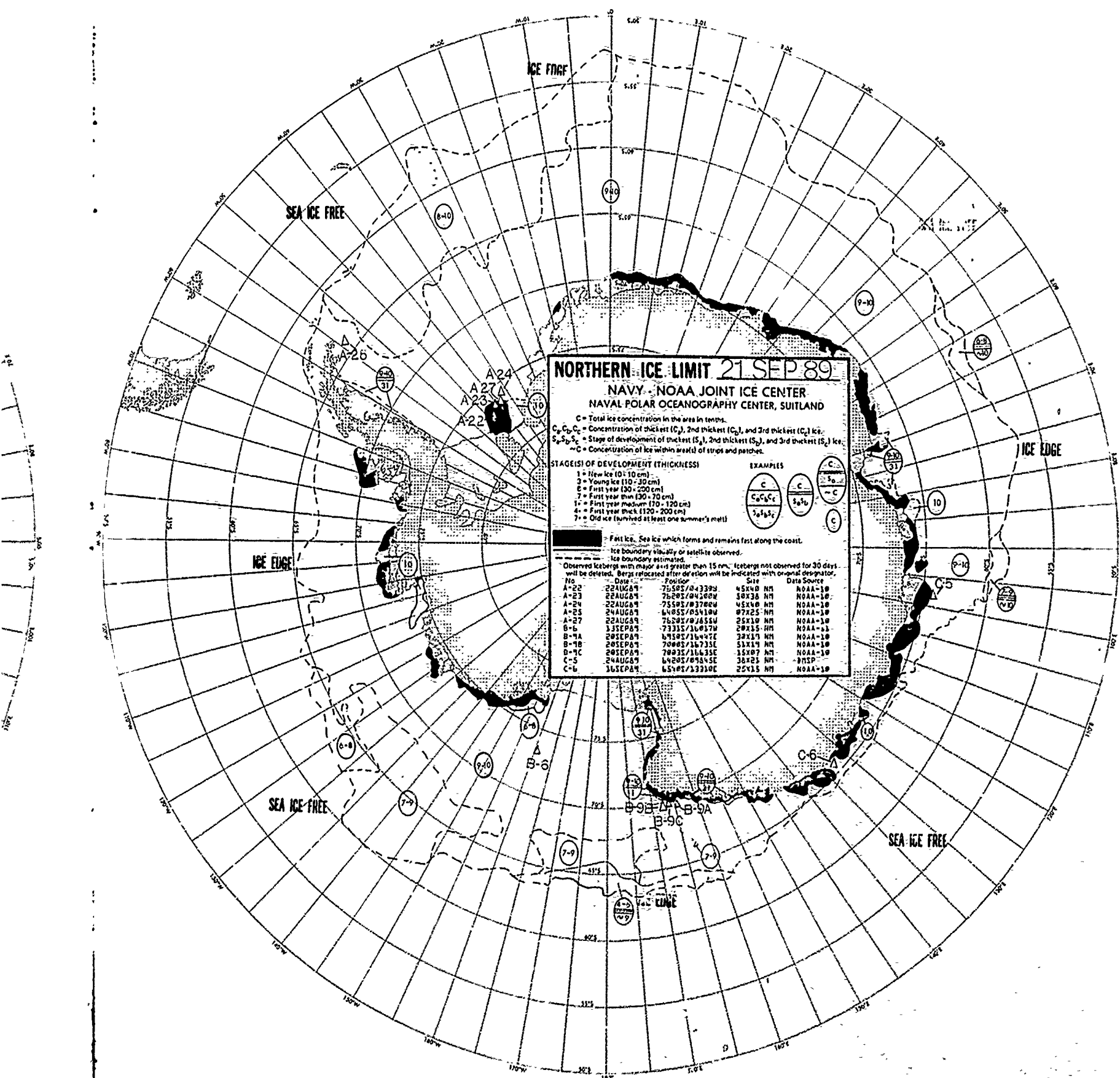
EXAMPLES

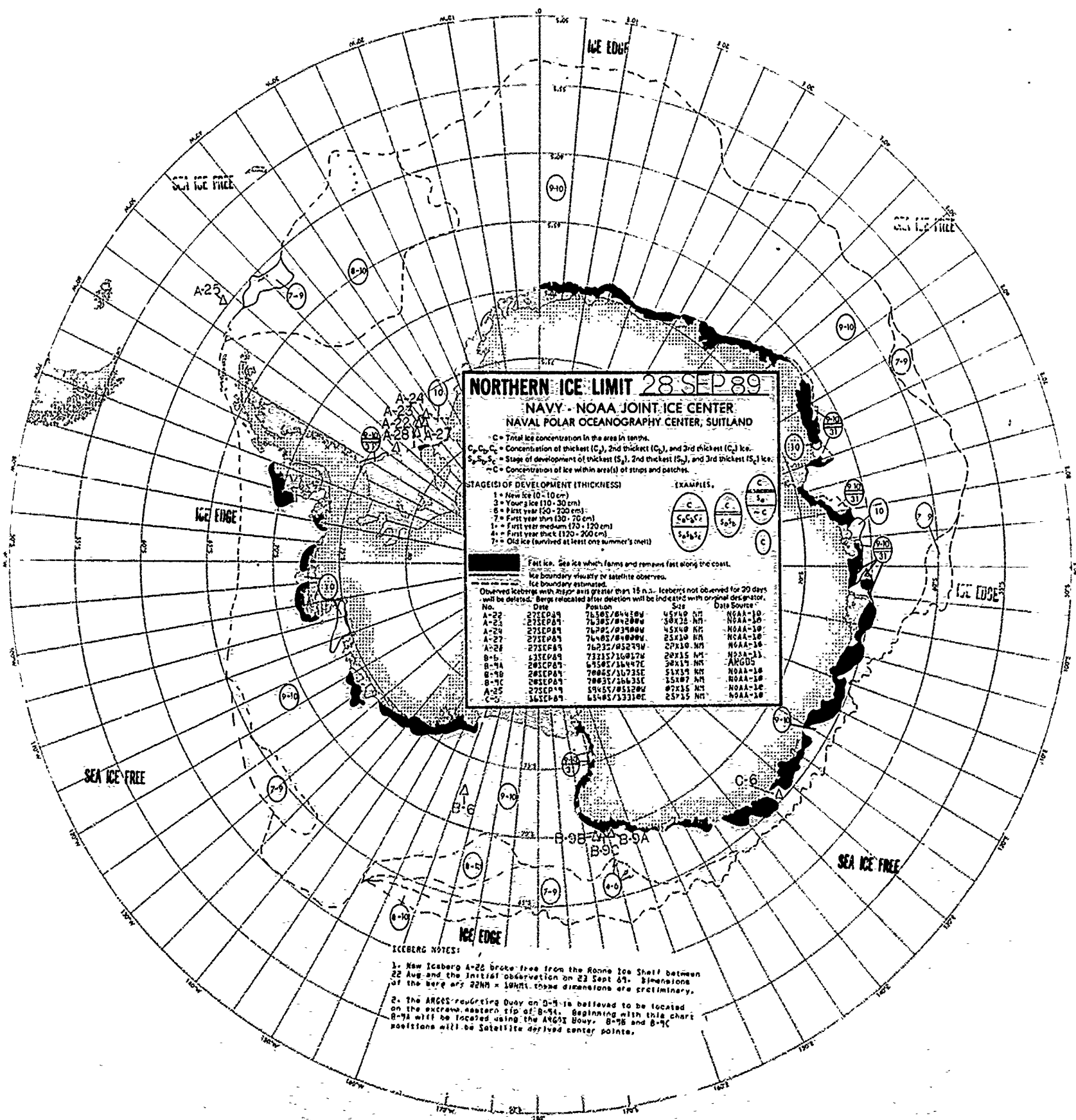
$\frac{C}{C_1 C_2 C_3}$	$\frac{C}{S_1 S_2 S_3}$	$\frac{C}{S_1 S_2}$	$\frac{C}{S_1 S_2 S_3}$
$\frac{C}{S_1 S_2 S_3}$	$\frac{C}{S_1 S_2}$	$\frac{C}{S_1 S_2}$	$\frac{C}{S_1 S_2 S_3}$

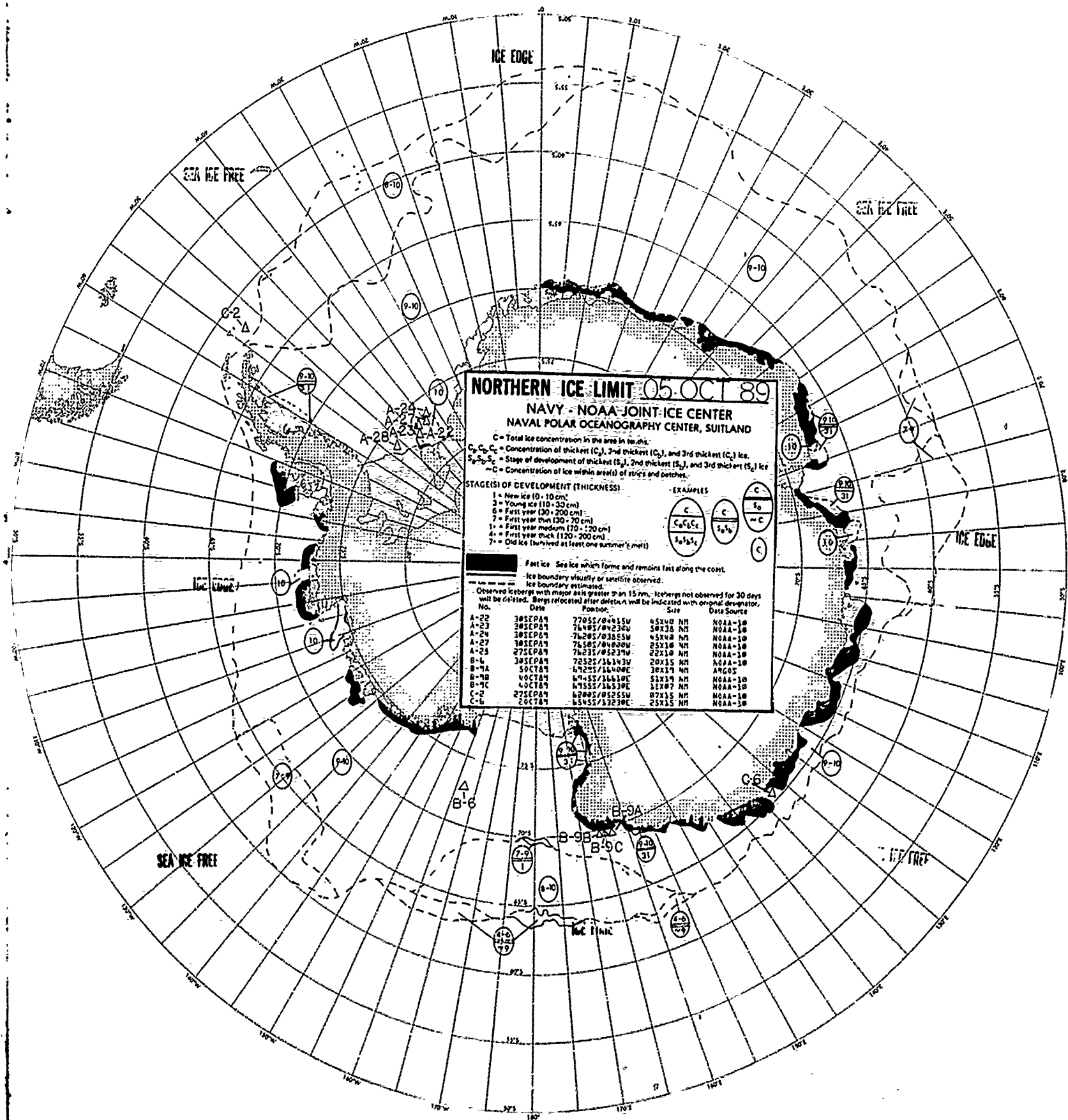
Fast ice - Sea ice which forms and remains fast along the coast.
 Ice boundary visually or satellite observed.
 Ice boundary estimated.
 Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Berge relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Data Source
A-25	22 AUG 89	76 505 / 04 1100	55X35 NM	NOAA-10
A-23	22 AUG 89	76 105 / 04 1000	45X30 NM	NOAA-10
A-24	23 AUG 89	75 505 / 03 0000	45X30 NM	NOAA-10
A-27	22 AUG 89	76 205 / 03 5500	25X15 NM	NOAA-10
B-6	6 SEP 89	74 005 / 16 0230	20X15 NM	NOAA-10
B-9A	6 SEP 89	67 375 / 16 3340	30X15 NM	NOAA-10
B-9C	6 SEP 89	67 555 / 16 3300	51X25 NM	NOAA-10
B-9A	6 SEP 89	67 535 / 16 3300	15X10 NM	NOAA-10
C-6	6 SEP 89	64 205 / 07 0400	28X25 NM	NOAA-10
D-10	6 SEP 89	65 305 / 13 3300	28X25 NM	NOAA-10
D-25	24 AUG 89	64 555 / 04 1000	07X25 NM	NOAA-10









NORTHERN ICE LIMIT 05 OCT 89

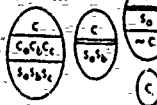
**NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND**

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
~C = Concentration of ice within area(s) of strips and patches.

STAGES OF DEVELOPMENT (THICKNESS):

- 1 = New ice (10 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 200 cm)
- 4 = First year thin (30 - 70 cm)
- 5 = First year medium (70 - 120 cm)
- 6 = First year thick (120 - 200 cm)
- 7 = Old ice (survived at least one summer's melt)

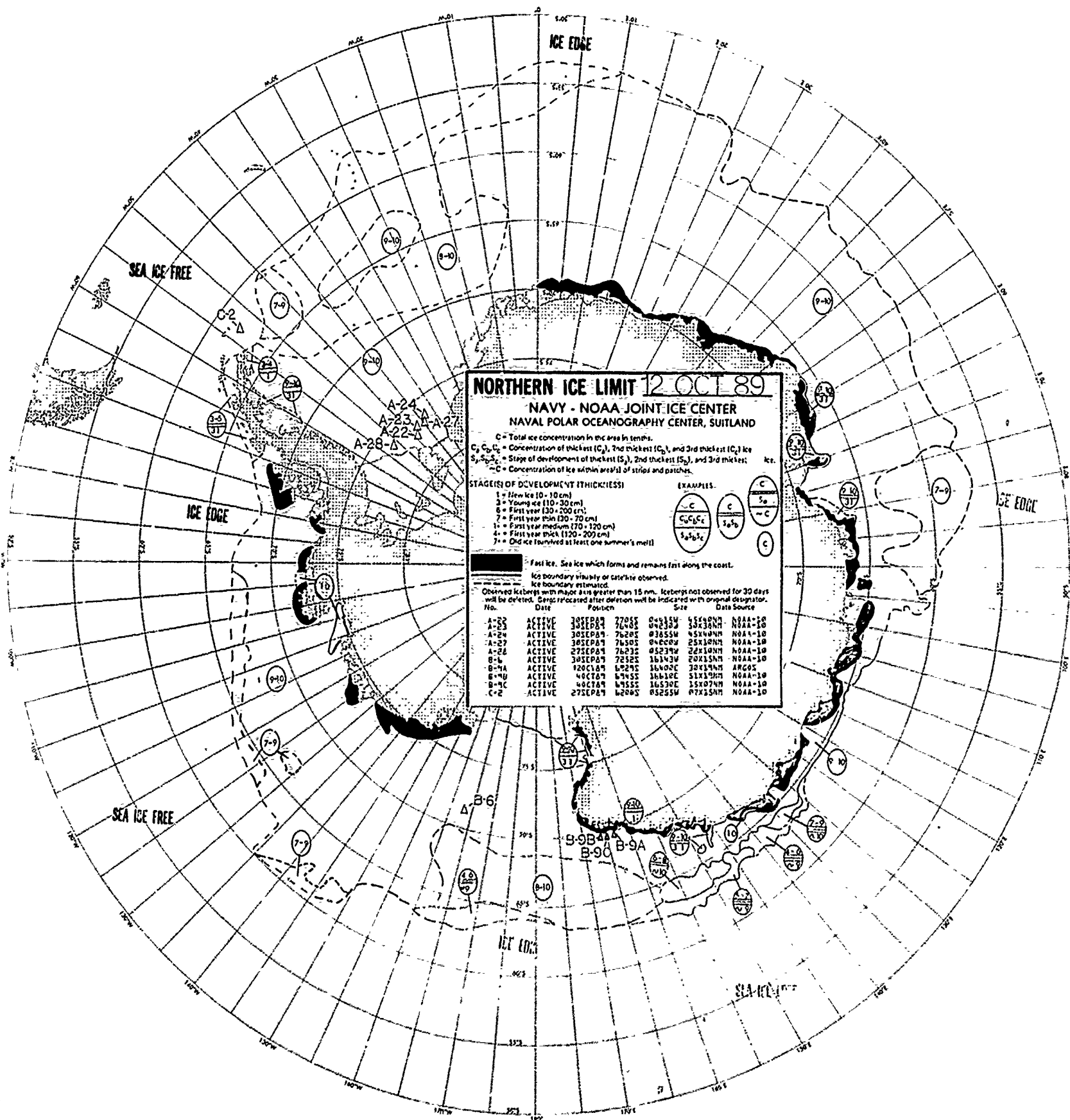
EXAMPLES

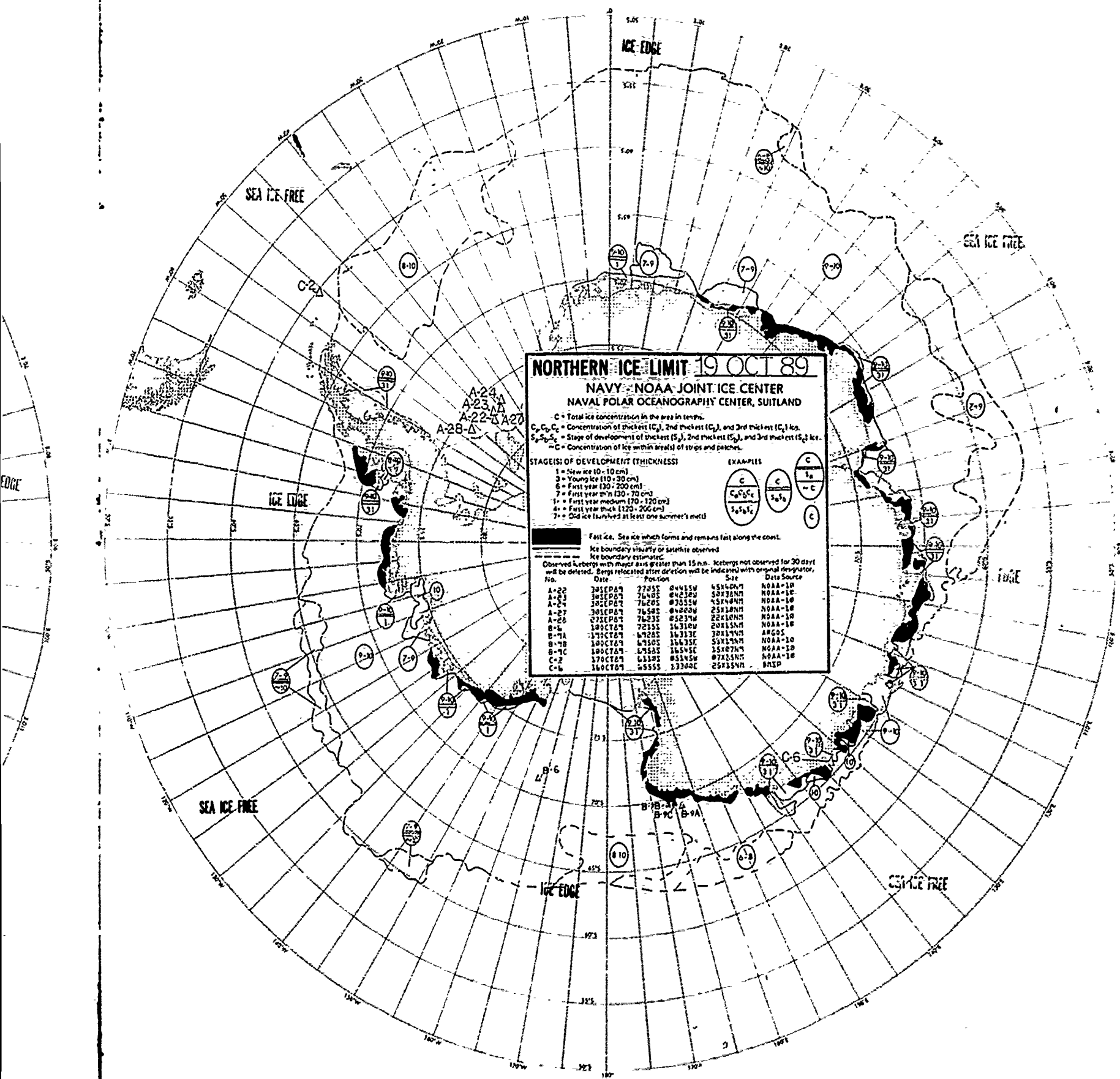


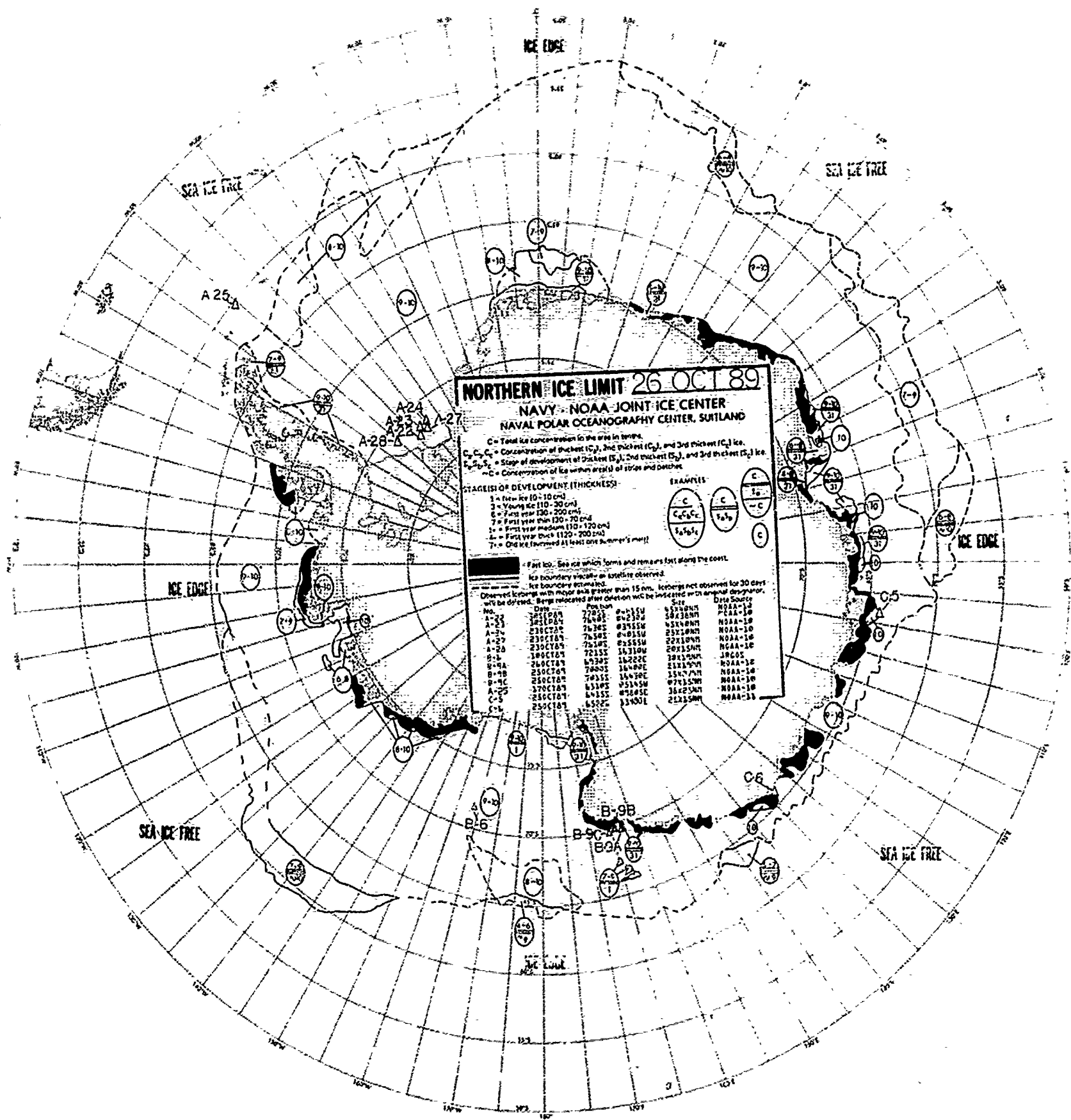
Fast ice - Sea ice which forms and remains fast along the coast.
Ice boundary visually or satellite observed.
Ice boundary estimated.

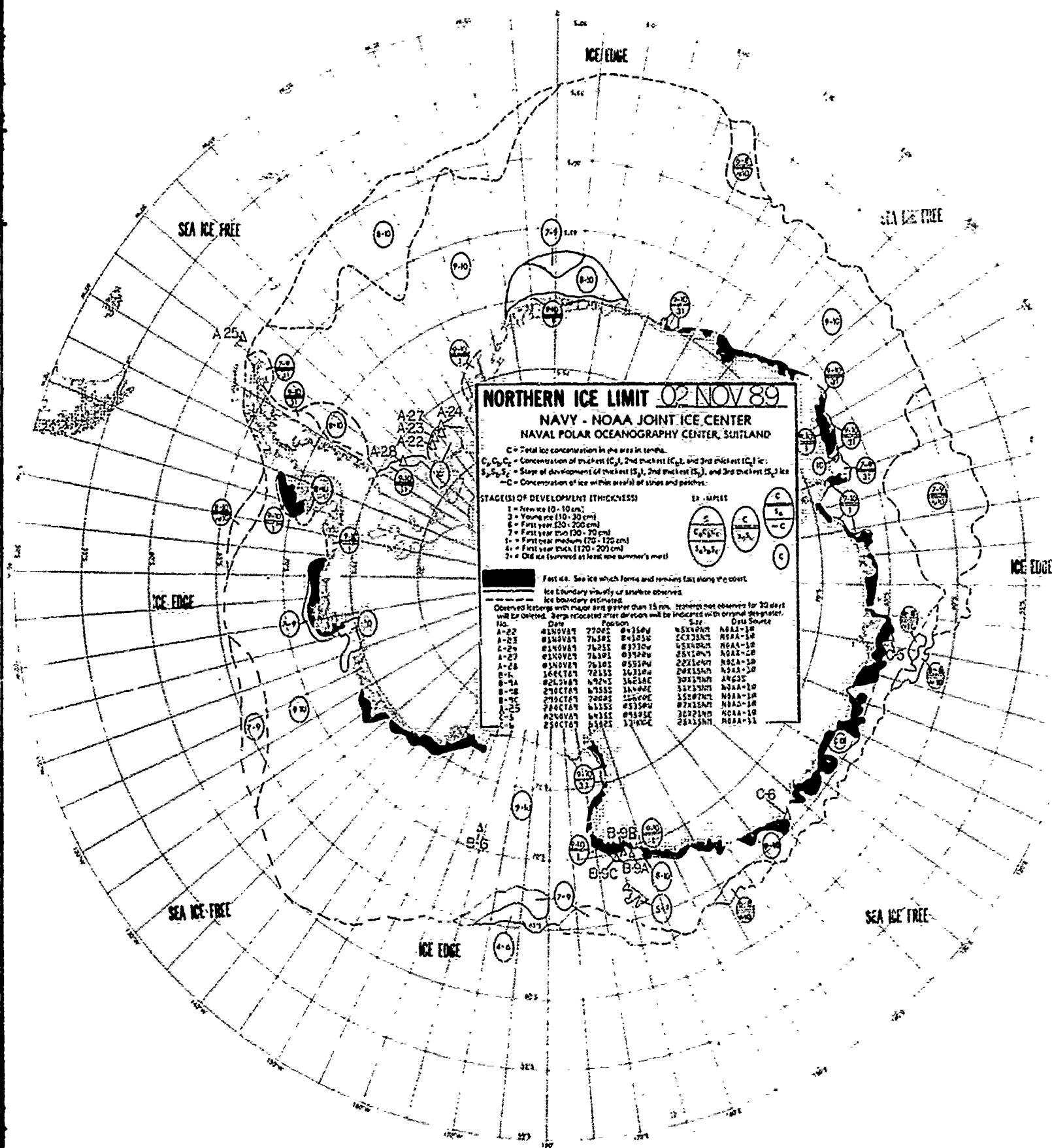
Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Bergs relocated after deletion will be indicated with original designator.

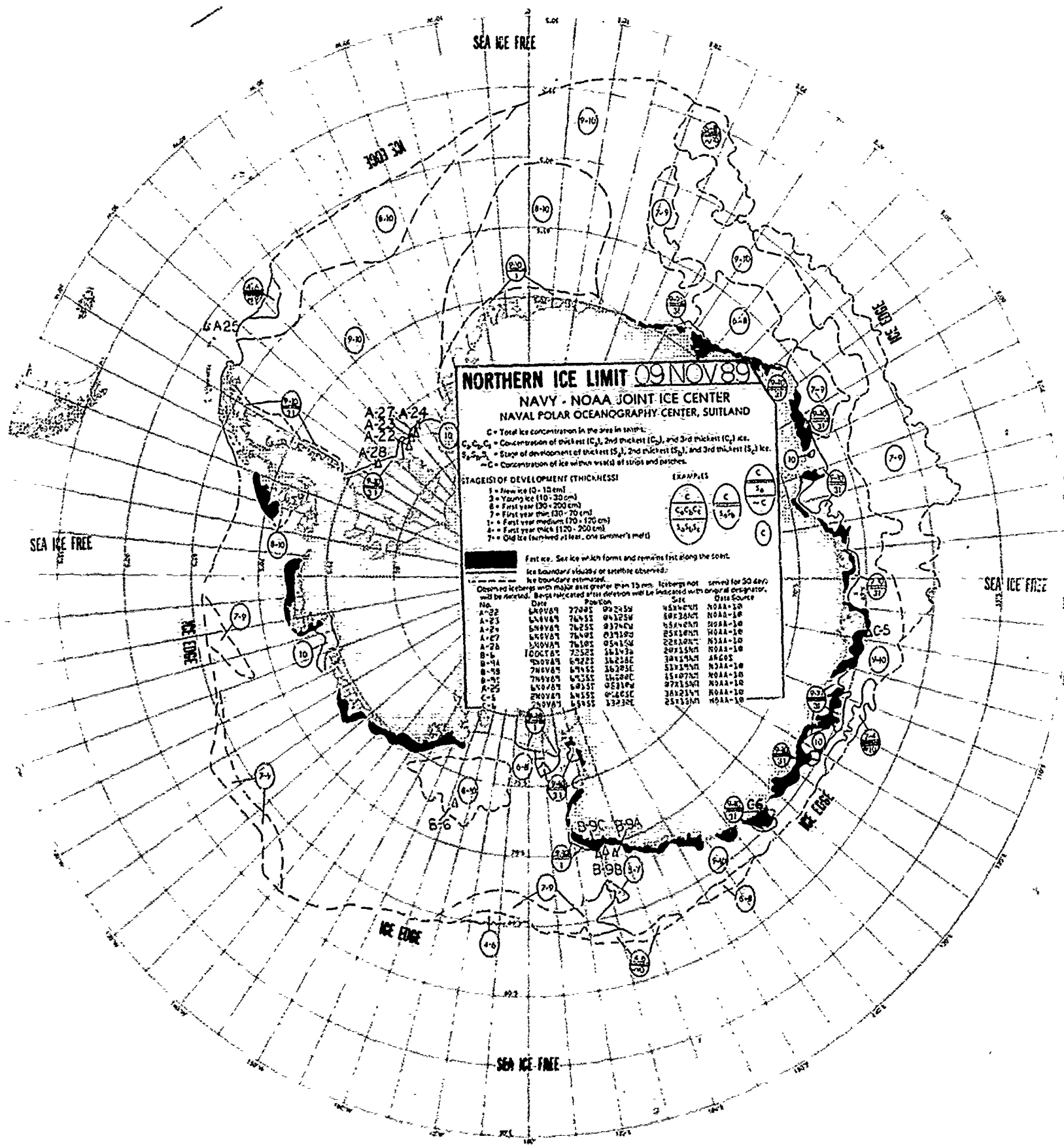
No.	Date	Position	Size	Data Source
A-22	30SEP89	77055/04415W	45X10 NM	NOAA-10
A-23	30SEP89	76485/04230W	50X30 NM	NOAA-10
A-24	30SEP89	76205/03555W	45X10 NM	NOAA-10
A-27	30SEP89	76505/04000W	25X10 NM	NOAA-10
A-28	27SEP89	76235/05237W	22X10 NM	NOAA-10
B-6	30SEP89	72525/16143W	20X15 NM	NOAA-10
B-7	30SEP89	67255/16400E	30X17 NM	ARGOS
B-8	4OCT89	67455/16100E	53X19 NM	NOAA-10
B-9	4OCT89	67555/16530E	11X07 NM	NOAA-10
C-2	27SEP89	67005/05255W	07X15 NM	NOAA-10
C-6	2OCT89	65455/13230E	25X15 NM	NOAA-10

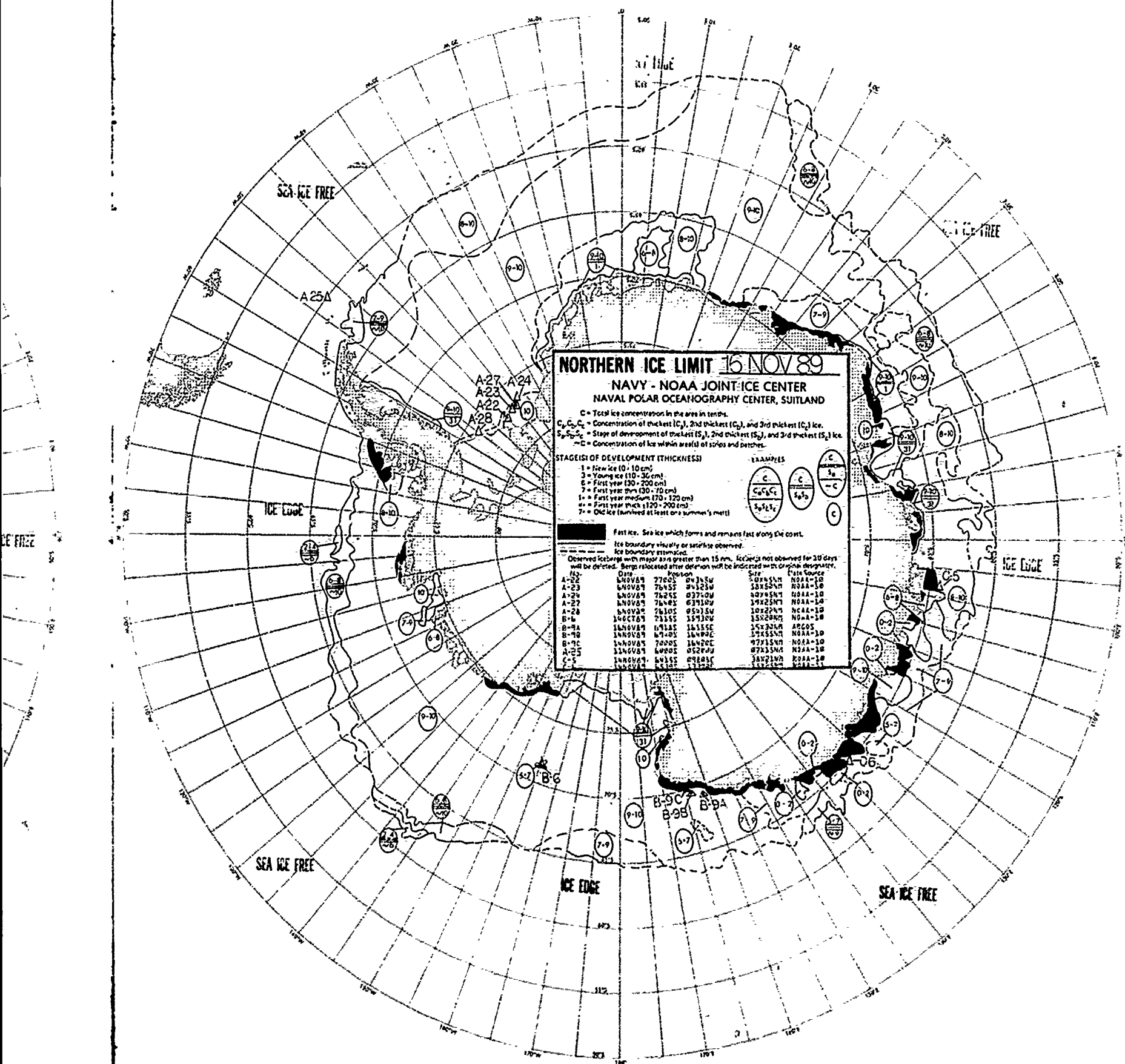


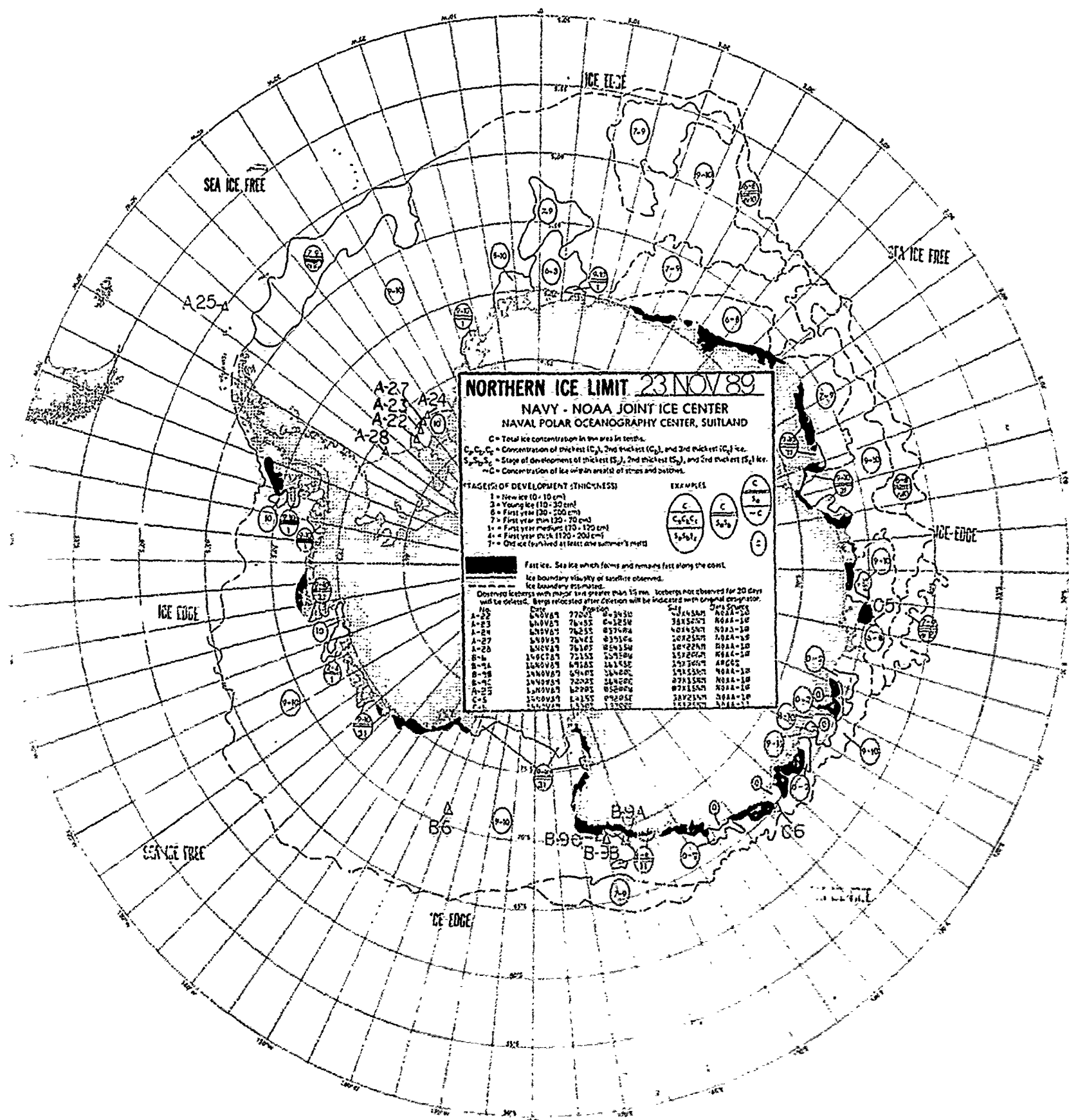


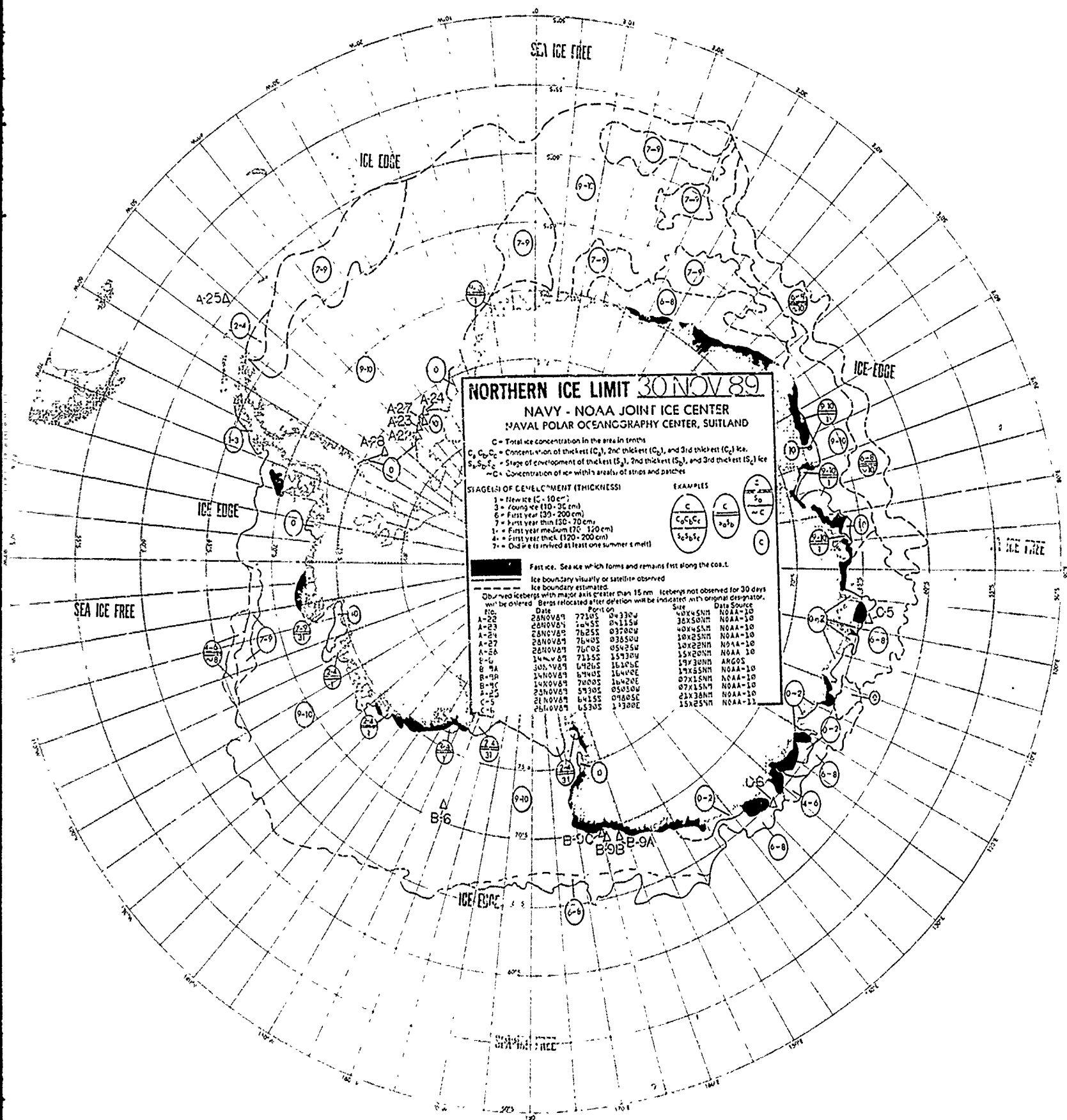


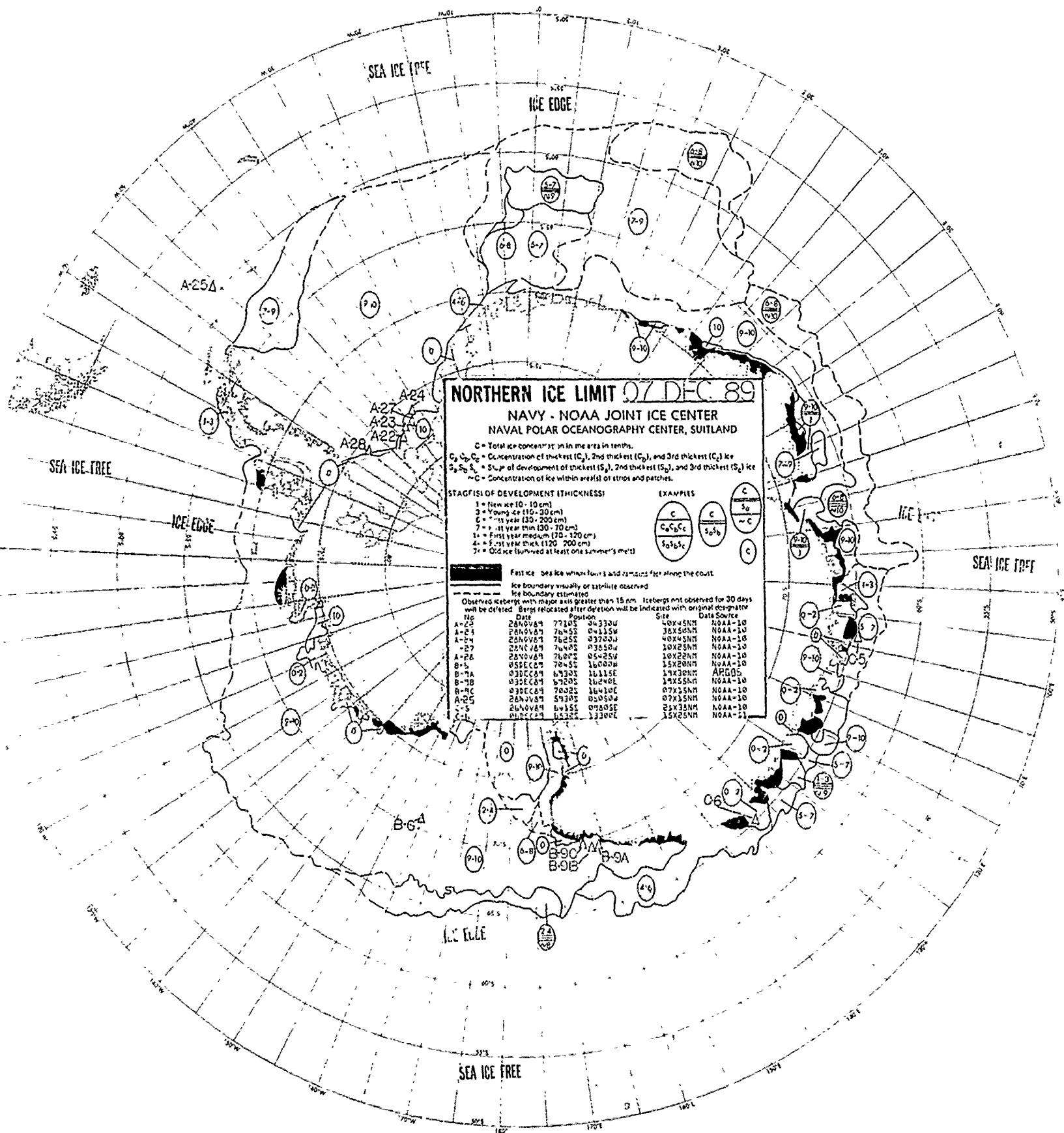












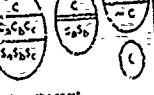
NORTHERN ICE LIMIT 14 DEC 89 **NAVY - NOAA JOINT ICE CENTER** **NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND**

C = Total ice concentration in the area in tenths.
 C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
 A = Concentration of ice within streaks of strips and patches.

STAGES OF DEVELOPMENT (THICKNESS)

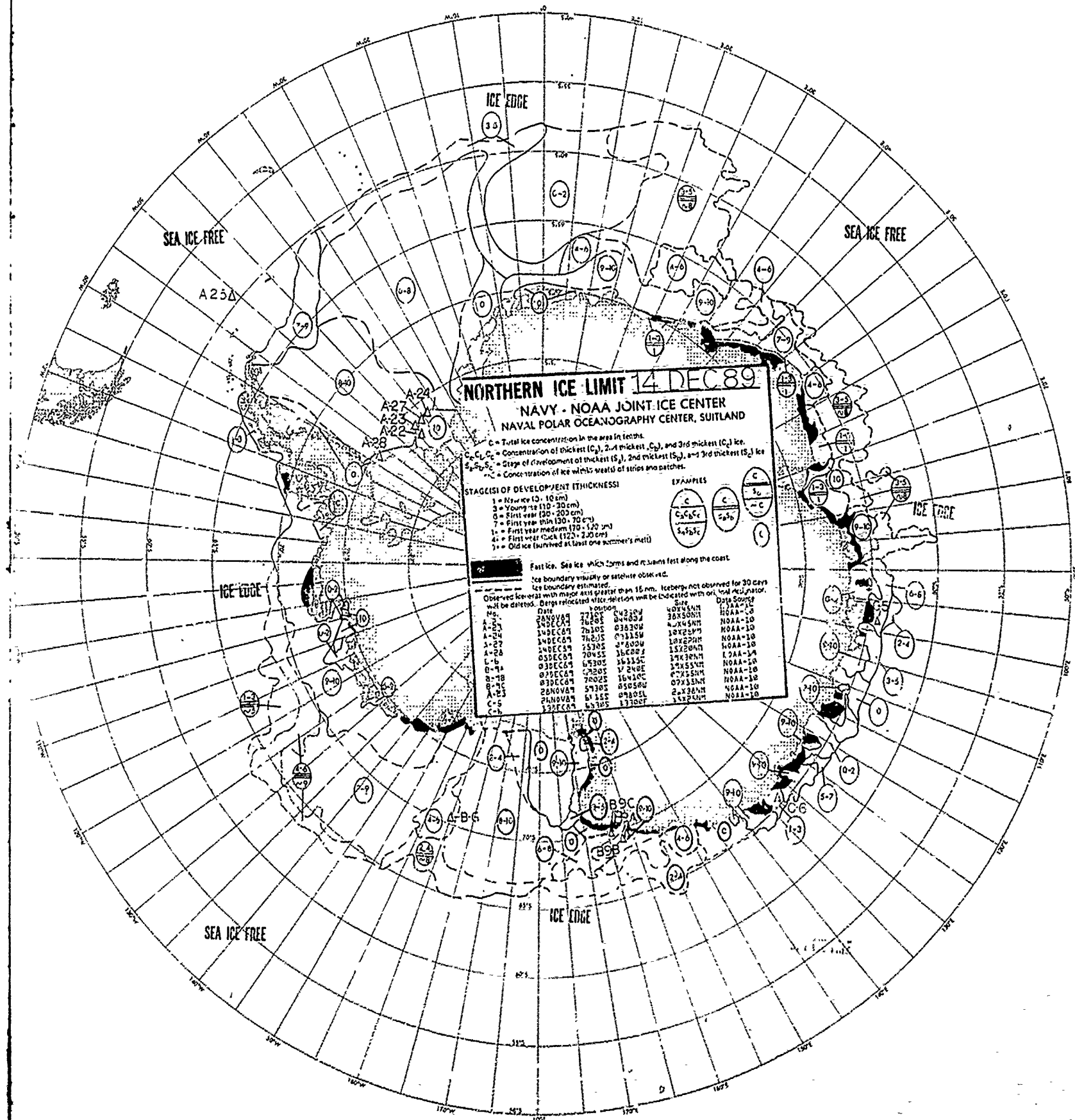
- 1 = New ice (10 - 10 cm)
- 2 = Young ice (10 - 20 cm)
- 3 = First year (20 - 30 cm)
- 4 = First year thin (30 - 50 cm)
- 5 = First year medium (50 - 100 cm)
- 6 = First year thick (100 - 200 cm)
- 7 = Old ice (survived at least one summer's melt)

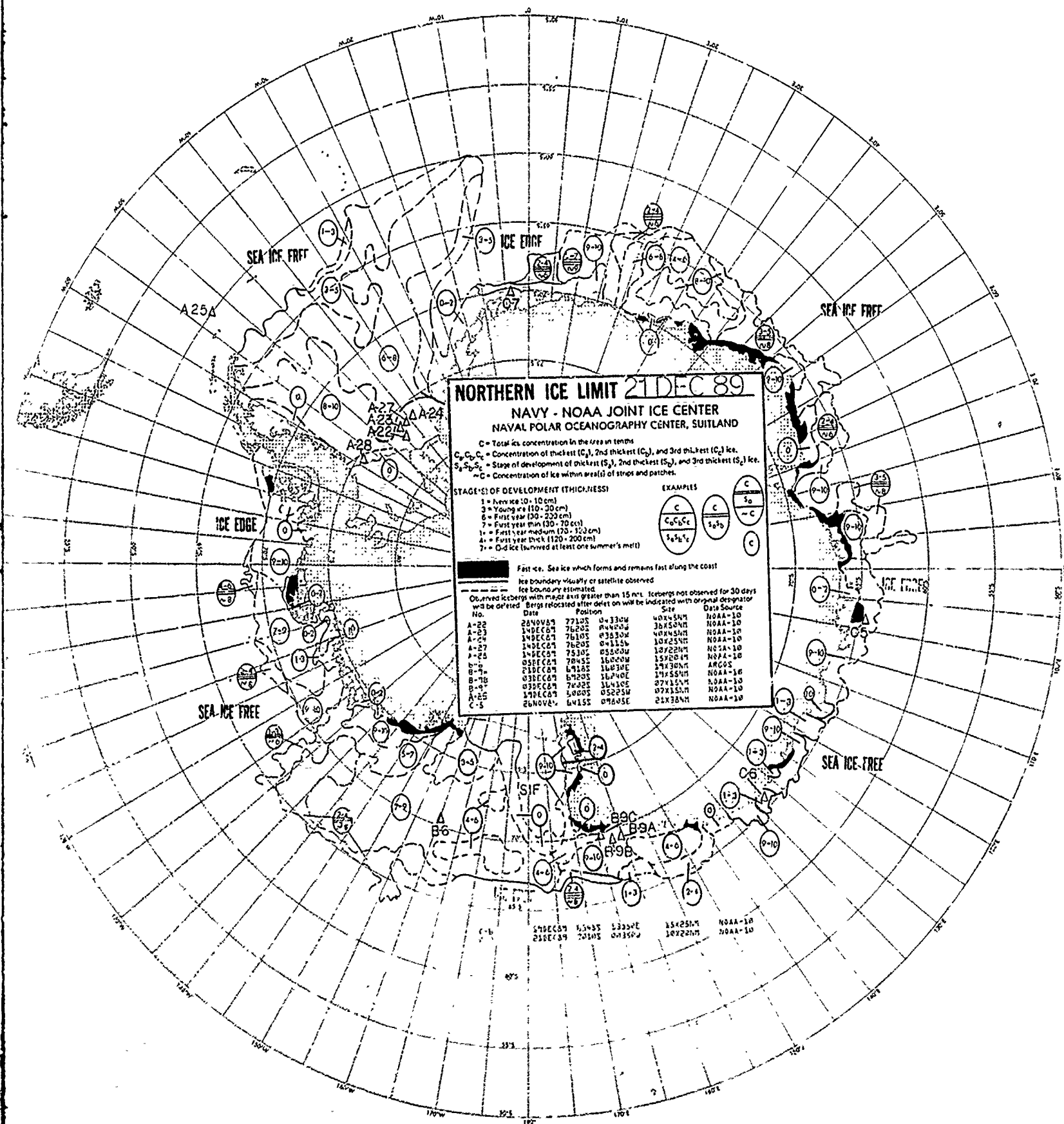
EXAMPLES

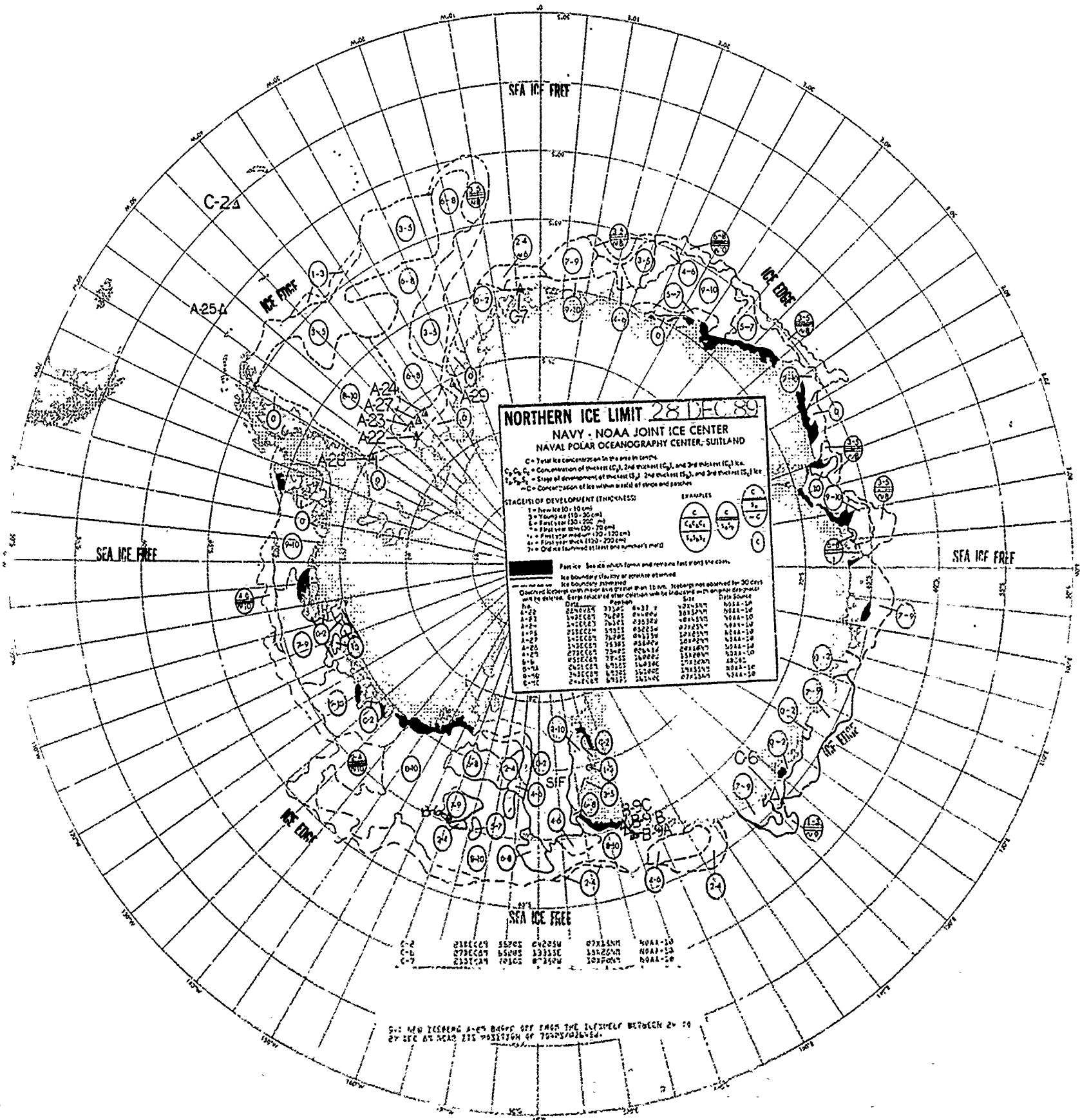


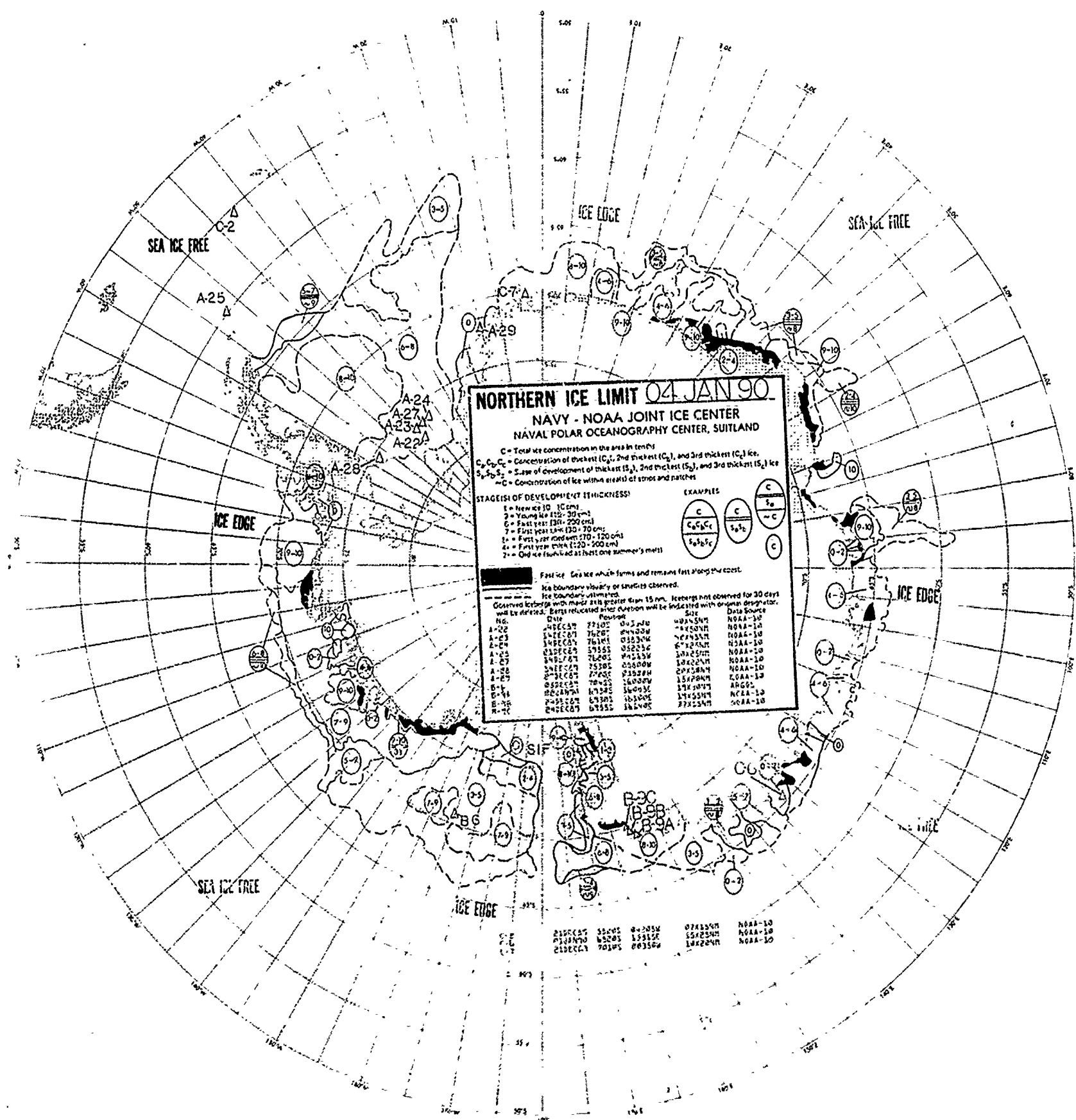
Fast ice: Sea ice which forms and remains fast along the coast.
 Ice boundary visually or satellite observed.
 Ice boundary estimated.
 Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Berge relocated after deletion will be indicated with an "X" and "R" prior.

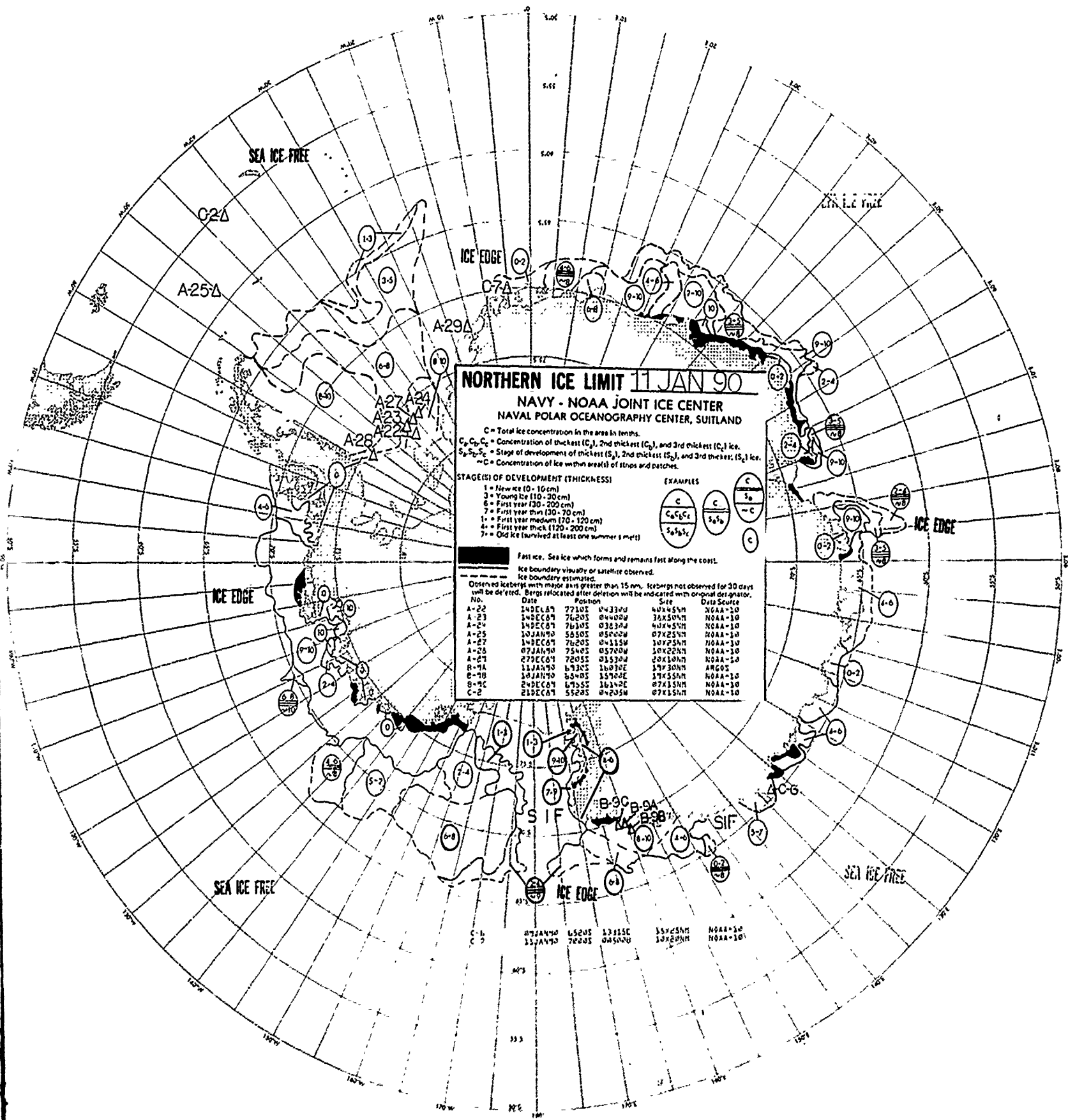
No.	Date	Location	Size	Data Source
A-2	28NOV89	7710E 04230W	40X15NM	NOAA-10
A-3	14DEC89	7610E 04435W	30X50NM	NOAA-10
A-24	14DEC89	7610E 03830W	40X45NM	NOAA-10
A-27	14DEC89	7620E 03815W	10X25NM	NOAA-10
A-28	14DEC89	7530E 03800W	15X20NM	NOAA-10
B-1	03DEC89	7045E 16500E	17X30NM	NOAA-10
B-7A	03DEC89	6730E 1615E	17X30NM	NOAA-10
B-7B	03DEC89	6730E 1615E	17X30NM	NOAA-10
B-7C	03DEC89	6730E 1615E	17X30NM	NOAA-10
A-13	28NOV89	5730E 05050W	20X30NM	NOAA-10
C-9	13DEC89	6710E 1710E	15X15NM	NOAA-10











NORTHERN ICE LIMIT 11 JAN 90

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
~C = Concentration of ice within area(s) of strips and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 70 cm)
- 4 = First year (70 - 120 cm)
- 5 = First year (120 - 200 cm)
- 6 = Old ice (survived at least one summer's melt)

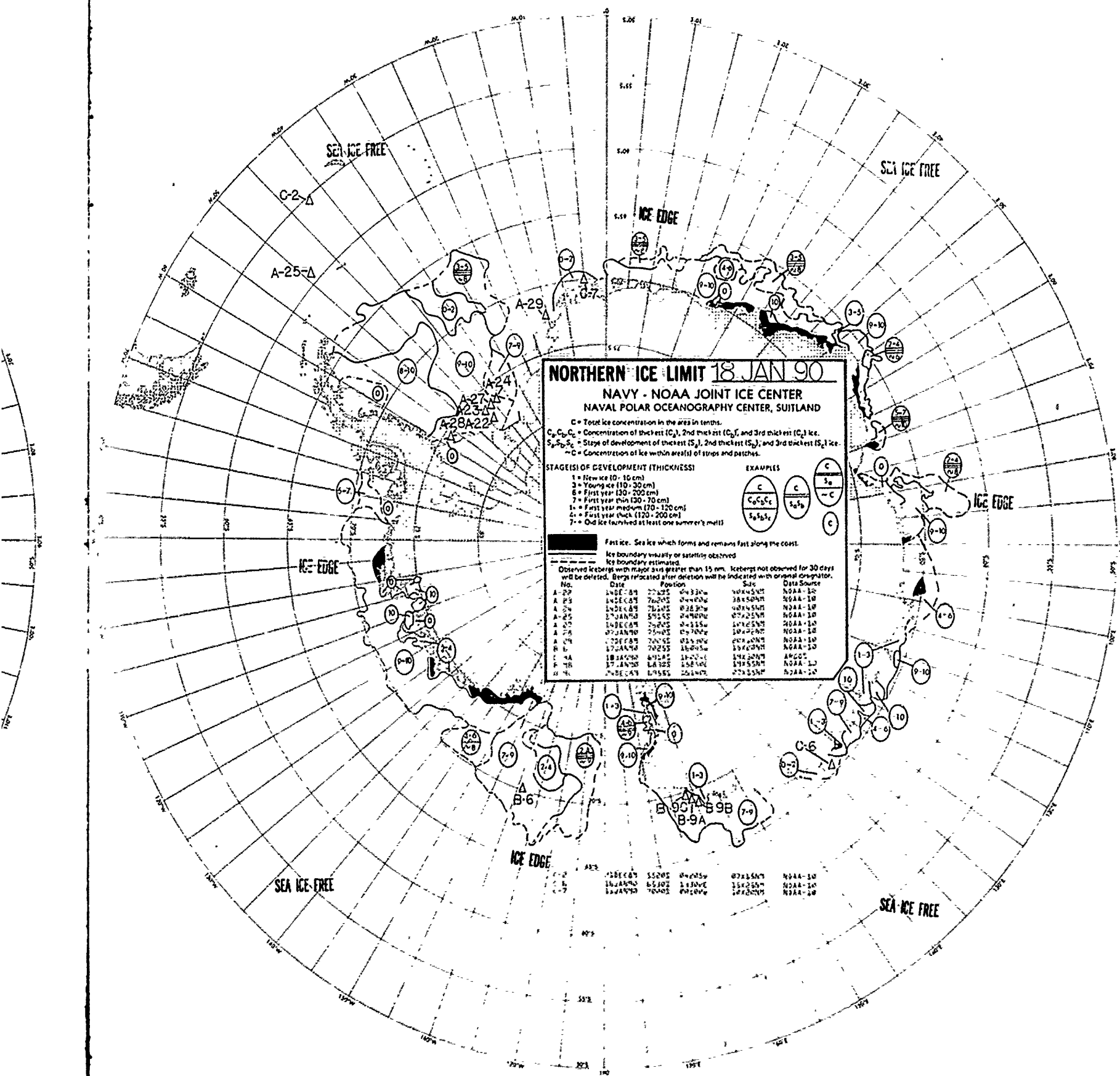
EXAMPLES

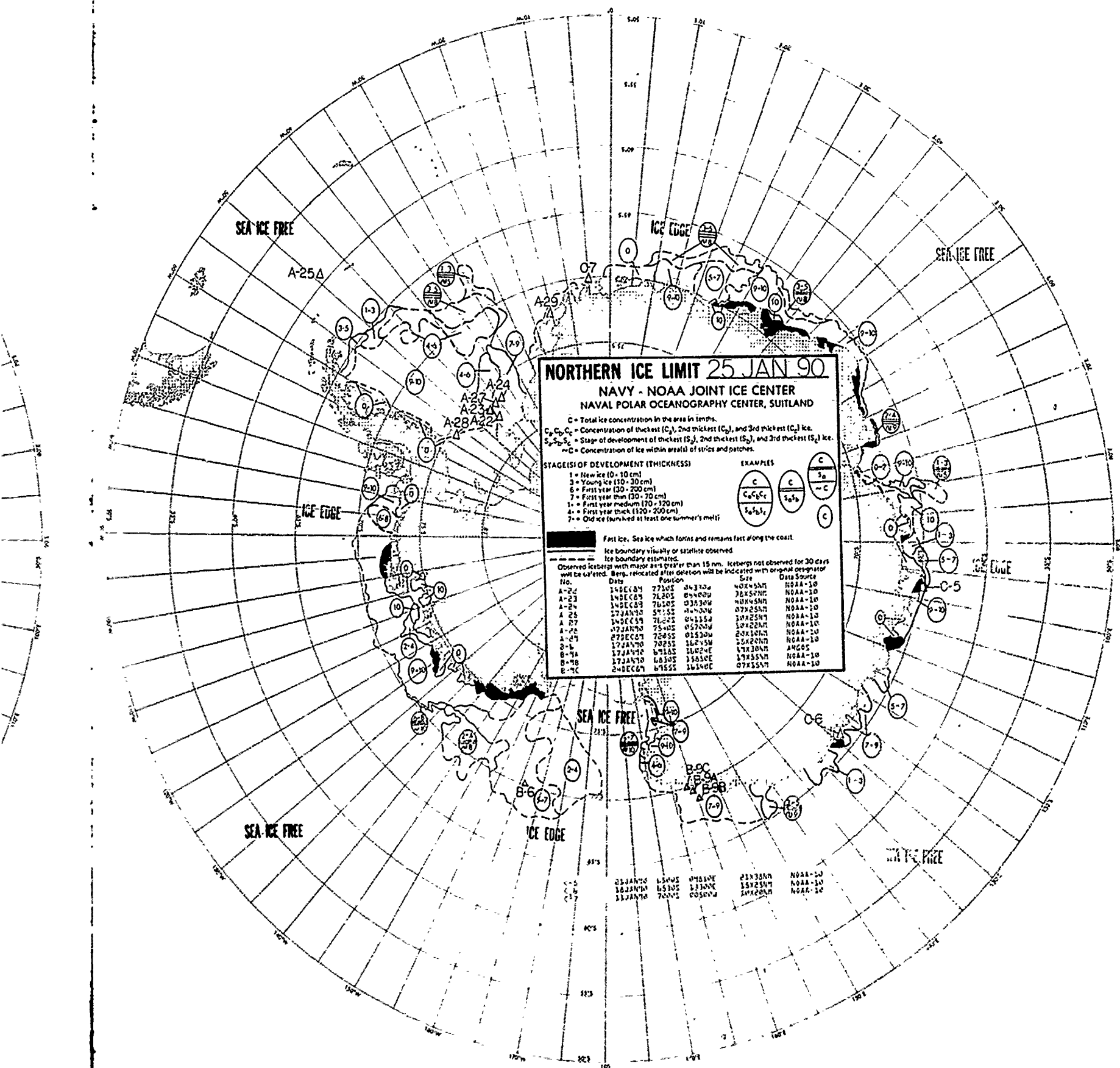


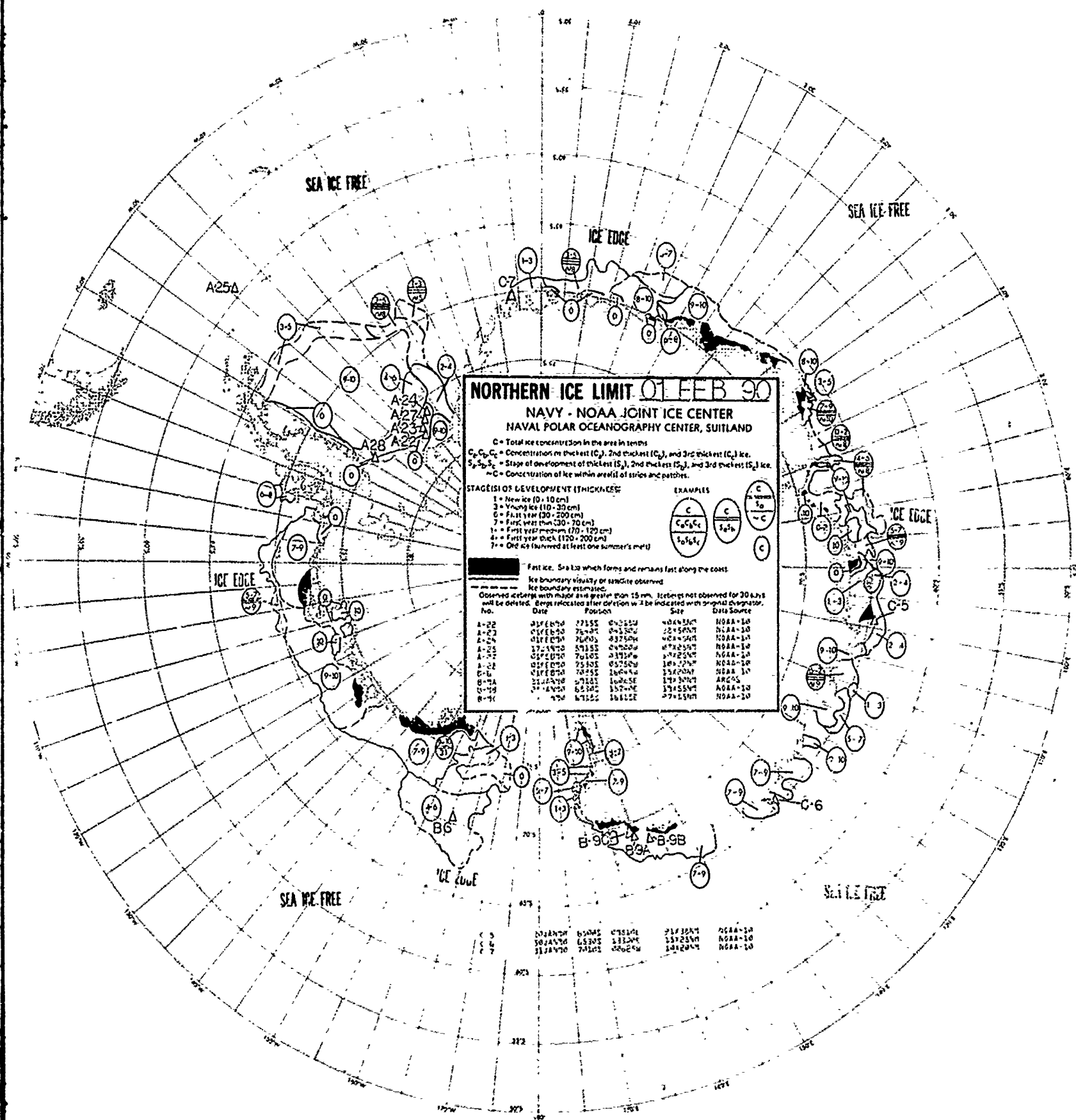
Fast ice. Sea ice which forms and remains fast along the coast.
Ice boundary visually or satellite observed.
Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Bergs relocated after deletion will be indicated with original designator.

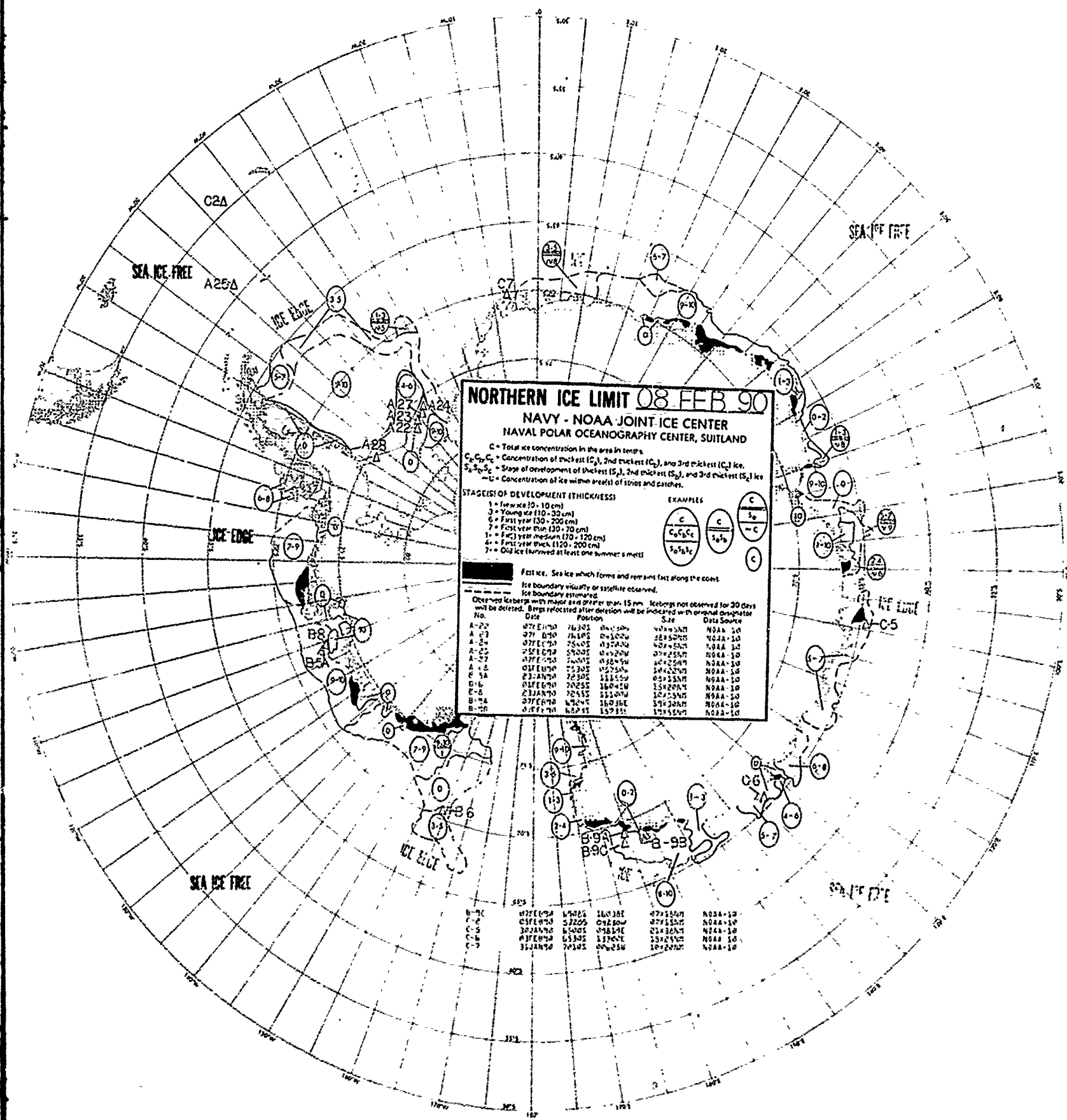
No.	Date	Position	Size	Data Source
A-22	14DEC89	77101 043300	40X45NM	NOAA-10
A-23	14DEC89	76205 044000	30X50NM	NOAA-10
A-24	14DEC89	76105 032300	40X45NM	NOAA-10
A-25	10JAN90	58505 050000	07X25NM	NOAA-10
A-27	14DEC89	76205 041150	30X25NM	NOAA-10
A-28	07JAN90	75405 057000	30X22NM	NOAA-10
A-29	27DEC89	72055 011500	20X10NM	NOAA-10
B-9A	11JAN90	69305 160300	19X30NM	ARGOS
B-9B	10JAN90	68405 157000	19X35NM	NOAA-10
B-9C	24DEC89	67555 161400	07X15NM	NOAA-10
C-2	21DEC89	55205 042050	07X15NM	NOAA-10

C-1	07JAN90	65205	131150	35X25NM	NOAA-10
C-2	11JAN90	70205	045000	30X20NM	NOAA-10









NORTHERN ICE LIMIT 08 FEB 90

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
 C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
 L = Concentration of ice within areas of strips and patches.

STAGES OF DEVELOPMENT (THICKNESS)

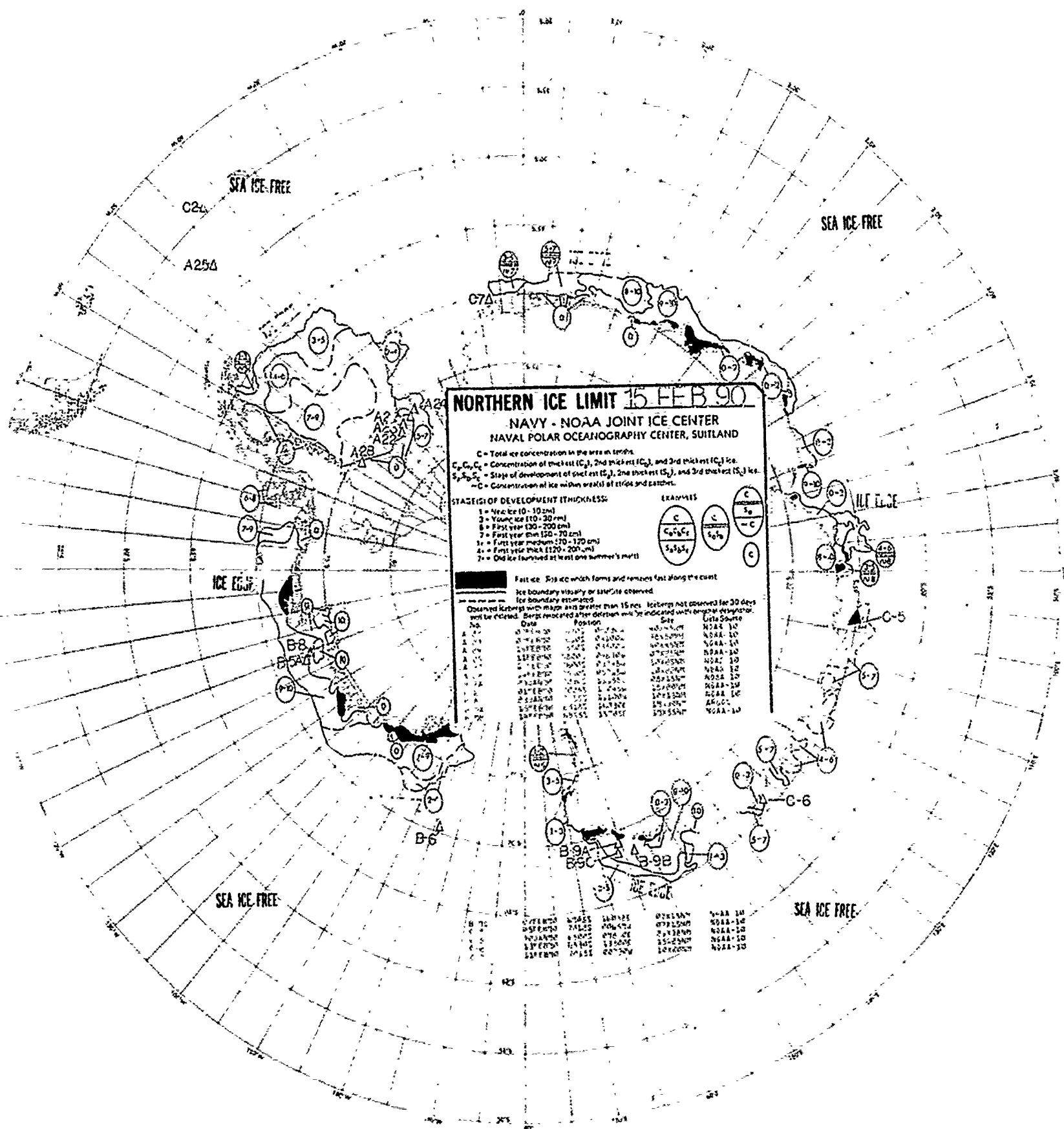
- 1 = New ice (10 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 100 cm)
- 4 = First year (100 - 170 cm)
- 5 = First year medium (170 - 200 cm)
- 6 = First year thick (120 - 200 cm)
- 7 = Old ice (survived at least one summer melt)

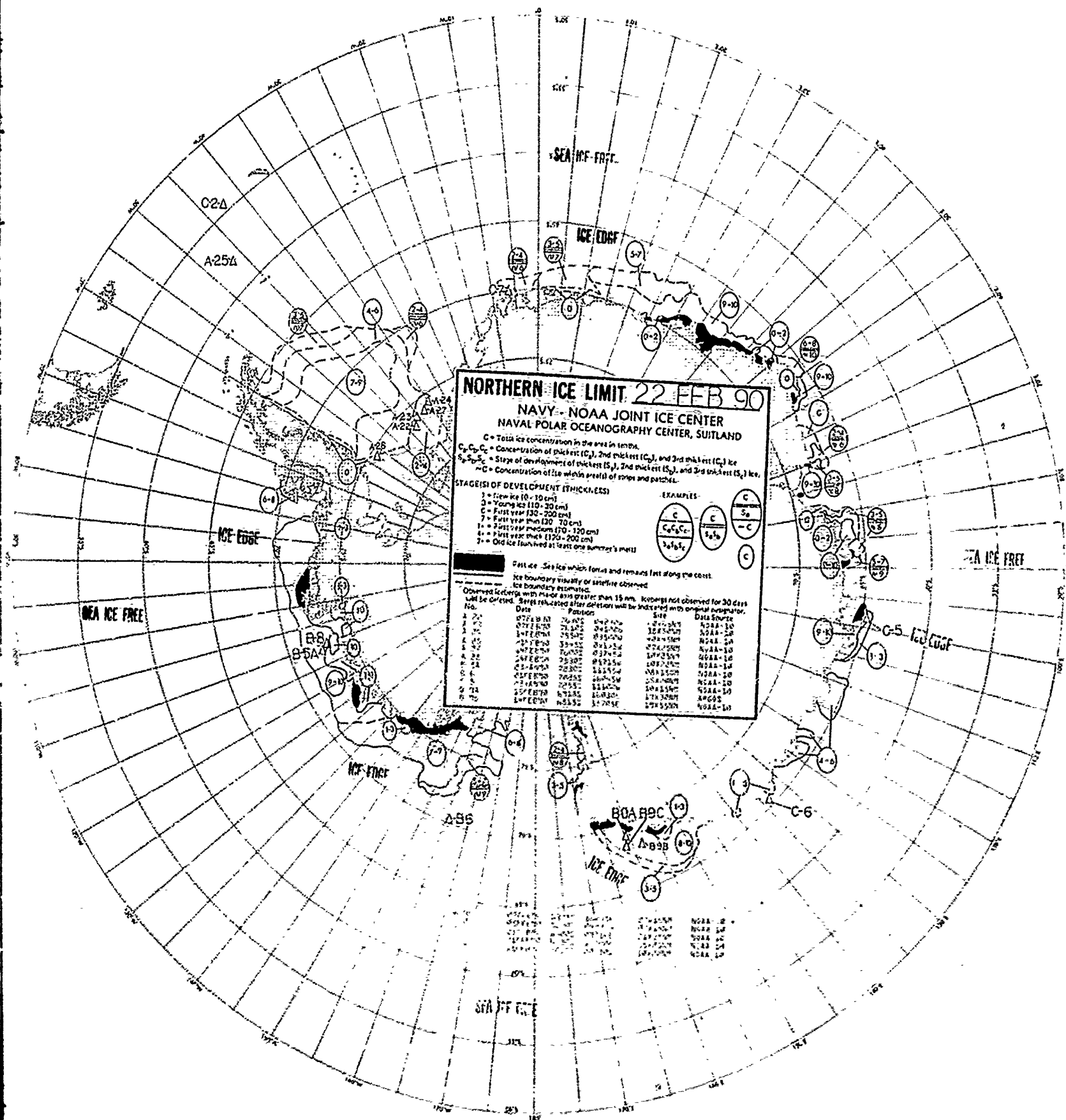
EXAMPLES

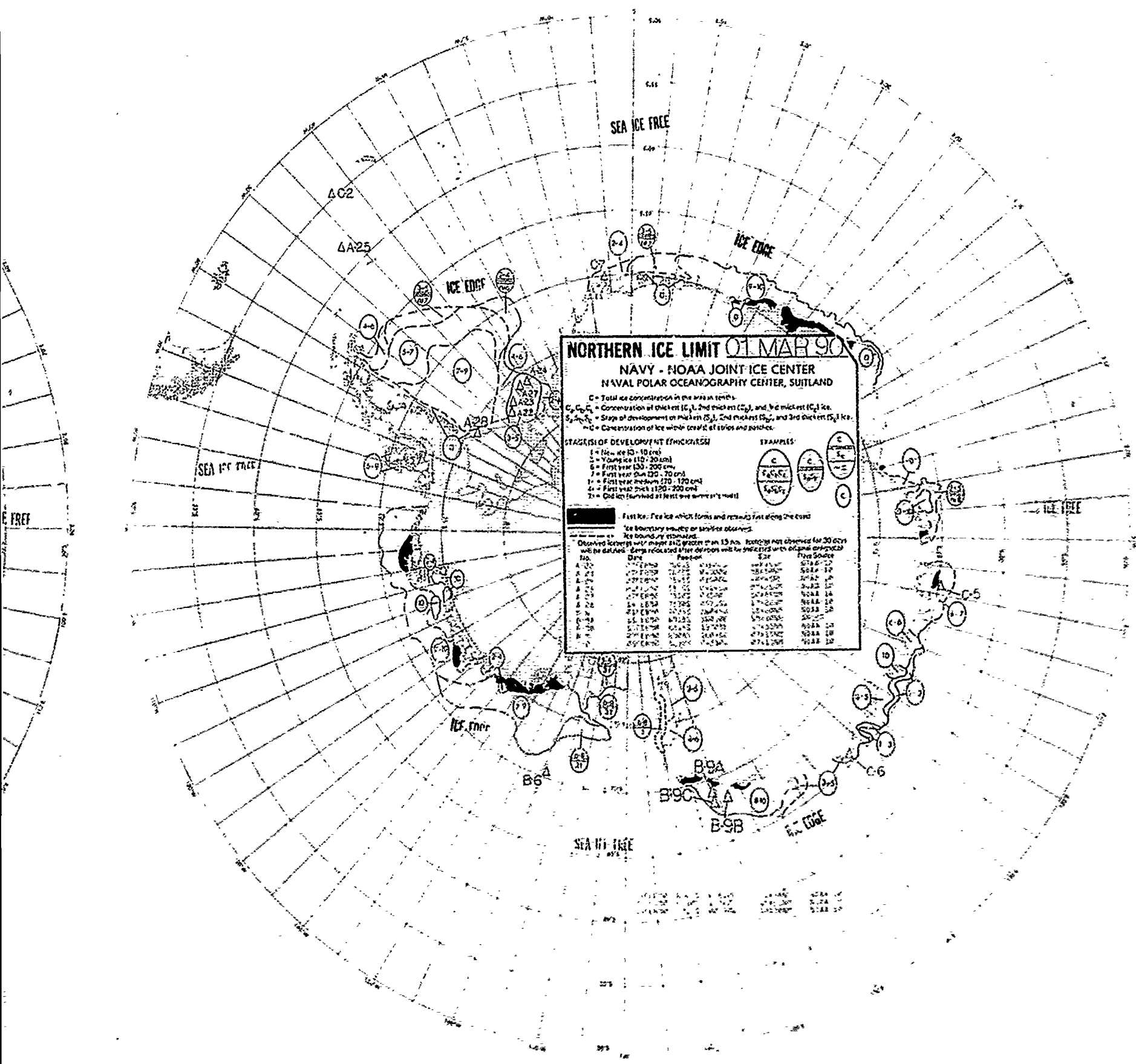
C	C ₁	C ₂	C ₃
S ₁	S ₂	S ₃	L

Fast ice. Sea ice which forms and remains fast along the coast.
Ice boundary. vicinity or satellite observed.
Ice boundary. estimated.
Observed icebergs. with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Berge relocated after deletion will be indicated with original designation.

No.	Date	Position	Size	Data Source
A-27	07 FEB 90	76 30S 160 30W	100 x 50M	NOAA-10
A-28	07 FEB 90	76 10S 160 30W	200 x 50M	NOAA-10
A-29	07 FEB 90	75 40S 160 30W	200 x 50M	NOAA-10
A-30	07 FEB 90	75 00S 160 30W	200 x 50M	NOAA-10
A-31	07 FEB 90	74 30S 160 30W	200 x 50M	NOAA-10
A-32	07 FEB 90	74 00S 160 30W	200 x 50M	NOAA-10
A-33	07 FEB 90	73 30S 160 30W	200 x 50M	NOAA-10
A-34	07 FEB 90	73 00S 160 30W	200 x 50M	NOAA-10
A-35	07 FEB 90	72 30S 160 30W	200 x 50M	NOAA-10
A-36	07 FEB 90	72 00S 160 30W	200 x 50M	NOAA-10
A-37	07 FEB 90	71 30S 160 30W	200 x 50M	NOAA-10
A-38	07 FEB 90	71 00S 160 30W	200 x 50M	NOAA-10
A-39	07 FEB 90	70 30S 160 30W	200 x 50M	NOAA-10
A-40	07 FEB 90	70 00S 160 30W	200 x 50M	NOAA-10
A-41	07 FEB 90	69 30S 160 30W	200 x 50M	NOAA-10
A-42	07 FEB 90	69 00S 160 30W	200 x 50M	NOAA-10
A-43	07 FEB 90	68 30S 160 30W	200 x 50M	NOAA-10
A-44	07 FEB 90	68 00S 160 30W	200 x 50M	NOAA-10
A-45	07 FEB 90	67 30S 160 30W	200 x 50M	NOAA-10
A-46	07 FEB 90	67 00S 160 30W	200 x 50M	NOAA-10
A-47	07 FEB 90	66 30S 160 30W	200 x 50M	NOAA-10
A-48	07 FEB 90	66 00S 160 30W	200 x 50M	NOAA-10
A-49	07 FEB 90	65 30S 160 30W	200 x 50M	NOAA-10
A-50	07 FEB 90	65 00S 160 30W	200 x 50M	NOAA-10







NORTHERN ICE LIMIT 01 MAY 90 **NAVY - NOAA JOINT ICE CENTER** **NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND**

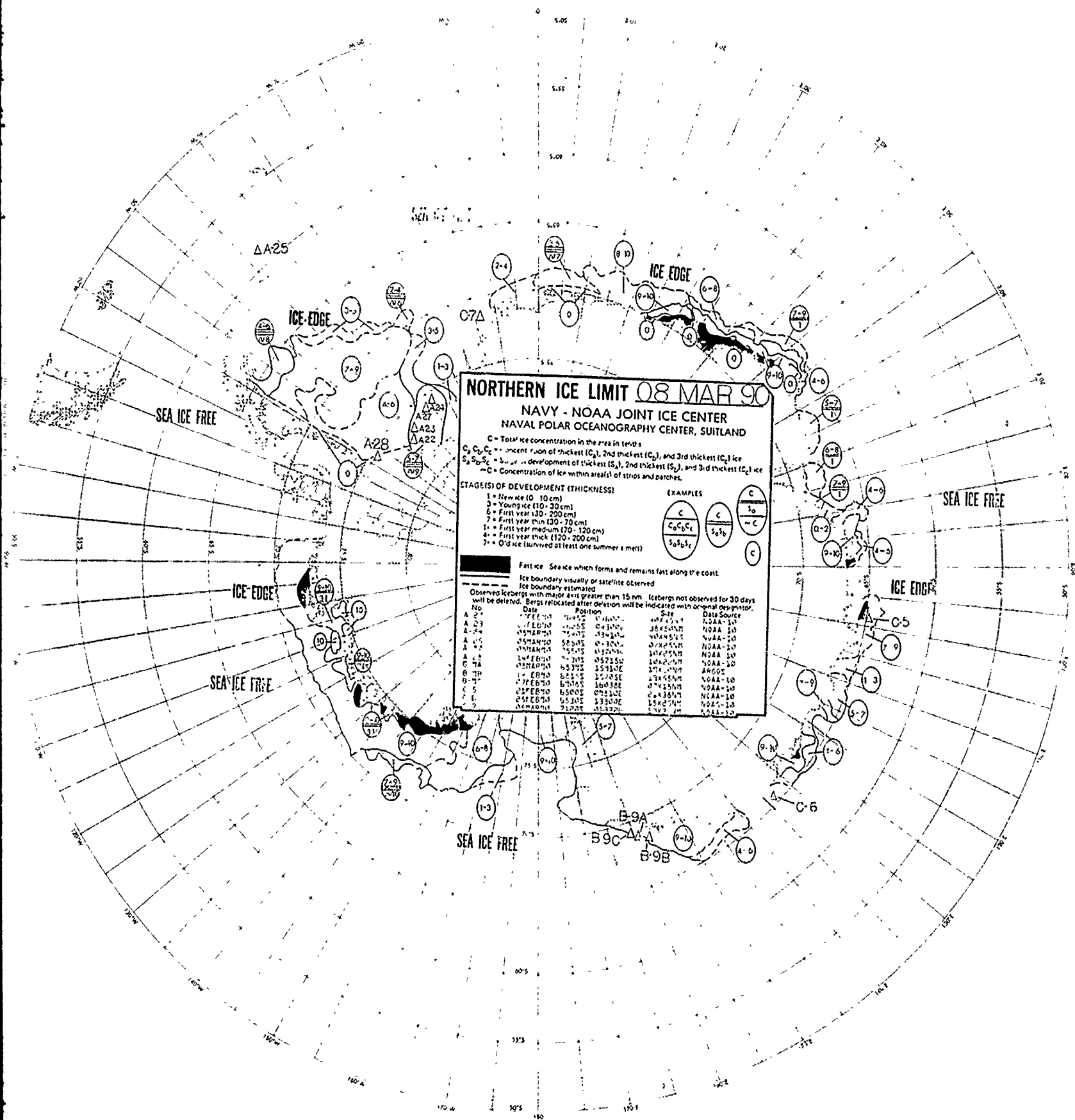
C = Total ice concentration in the area in tenths.
 C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 S₁, S₂, S₃ = Stage of development on thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
 W = Concentration of ice within 100 ft of ships and patches.

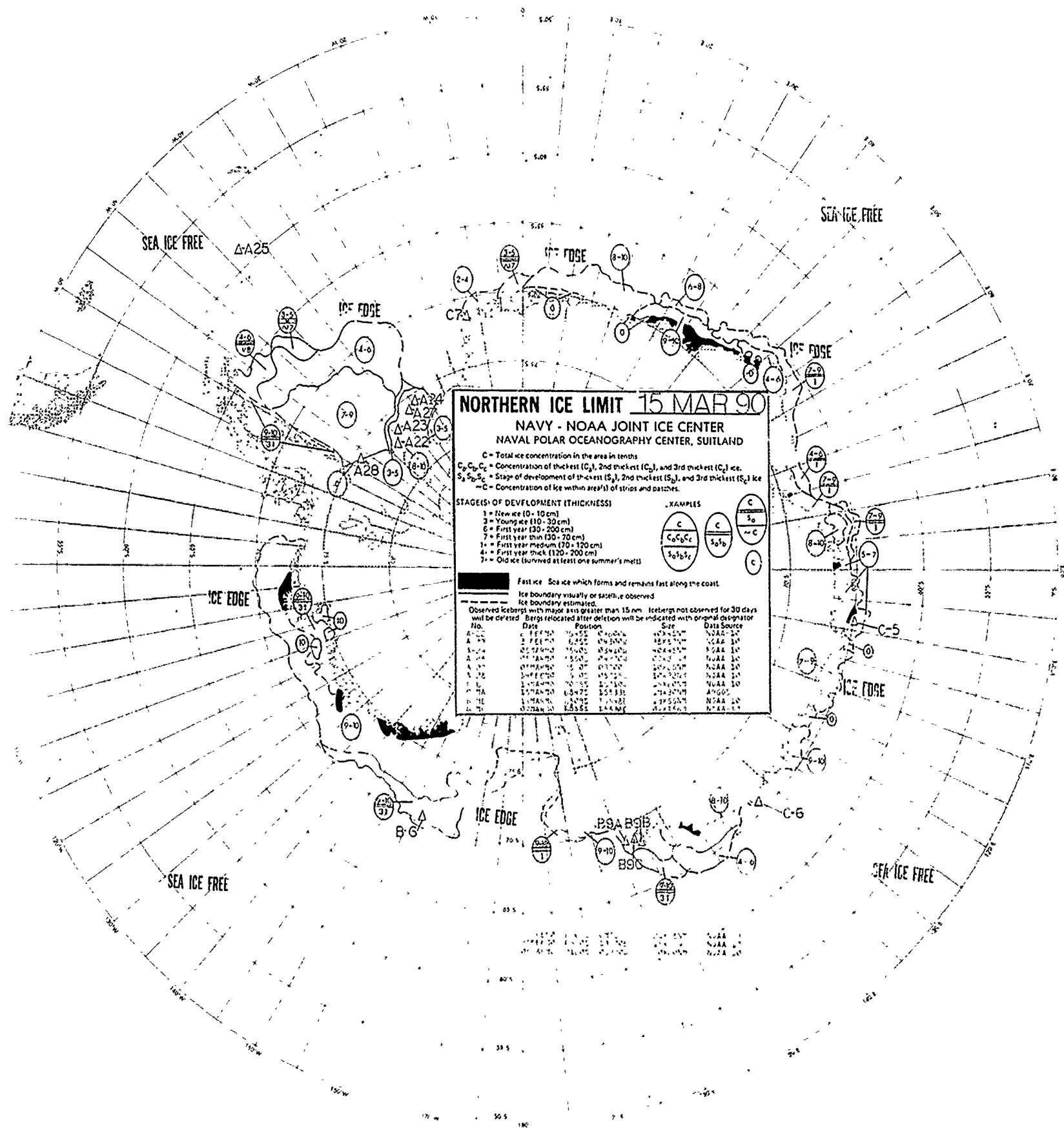
STAGES OF DEVELOPMENT (THICKNESS)

Stage	Thickness (cm)
1	10 - 15
2	15 - 20
3	20 - 25
4	25 - 30
5	30 - 35
6	35 - 40
7	40 - 45
8	45 - 50
9	50 - 55
10	55 - 60
11	60 - 65
12	65 - 70
13	70 - 75
14	75 - 80
15	80 - 85
16	85 - 90
17	90 - 95
18	95 - 100
19	100 - 105
20	105 - 110
21	110 - 115
22	115 - 120
23	120 - 125
24	125 - 130
25	130 - 135
26	135 - 140
27	140 - 145
28	145 - 150
29	150 - 155
30	155 - 160
31	160 - 165
32	165 - 170
33	170 - 175
34	175 - 180
35	180 - 185
36	185 - 190
37	190 - 195
38	195 - 200
39	200 - 205
40	205 - 210
41	210 - 215
42	215 - 220
43	220 - 225
44	225 - 230
45	230 - 235
46	235 - 240
47	240 - 245
48	245 - 250
49	250 - 255
50	255 - 260
51	260 - 265
52	265 - 270
53	270 - 275
54	275 - 280
55	280 - 285
56	285 - 290
57	290 - 295
58	295 - 300
59	300 - 305
60	305 - 310
61	310 - 315
62	315 - 320
63	320 - 325
64	325 - 330
65	330 - 335
66	335 - 340
67	340 - 345
68	345 - 350
69	350 - 355
70	355 - 360
71	360 - 365
72	365 - 370
73	370 - 375
74	375 - 380
75	380 - 385
76	385 - 390
77	390 - 395
78	395 - 400
79	400 - 405
80	405 - 410
81	410 - 415
82	415 - 420
83	420 - 425
84	425 - 430
85	430 - 435
86	435 - 440
87	440 - 445
88	445 - 450
89	450 - 455
90	455 - 460
91	460 - 465
92	465 - 470
93	470 - 475
94	475 - 480
95	480 - 485
96	485 - 490
97	490 - 495
98	495 - 500
99	500 - 505
100	505 - 510

Fast Ice: Ice which forms and remains fast along the coast.
 Ice Boundary: Boundary of ice or water observed.
 Ice Boundary: Boundary of ice or water observed.
 Observed icebergs with height and position in 15 min. Icebergs not observed for 30 days will be deleted. Large icebergs and other debris will be indicated with appropriate symbols.

No.	Date	Position	Height	Remarks
A-10	10/10/90	75°N 15°E	10m	Small iceberg
A-11	10/10/90	75°N 15°E	10m	Small iceberg
A-12	10/10/90	75°N 15°E	10m	Small iceberg
A-13	10/10/90	75°N 15°E	10m	Small iceberg
A-14	10/10/90	75°N 15°E	10m	Small iceberg
A-15	10/10/90	75°N 15°E	10m	Small iceberg
A-16	10/10/90	75°N 15°E	10m	Small iceberg
A-17	10/10/90	75°N 15°E	10m	Small iceberg
A-18	10/10/90	75°N 15°E	10m	Small iceberg
A-19	10/10/90	75°N 15°E	10m	Small iceberg
A-20	10/10/90	75°N 15°E	10m	Small iceberg
A-21	10/10/90	75°N 15°E	10m	Small iceberg
A-22	10/10/90	75°N 15°E	10m	Small iceberg
A-23	10/10/90	75°N 15°E	10m	Small iceberg
A-24	10/10/90	75°N 15°E	10m	Small iceberg
A-25	10/10/90	75°N 15°E	10m	Small iceberg
A-26	10/10/90	75°N 15°E	10m	Small iceberg
A-27	10/10/90	75°N 15°E	10m	Small iceberg
A-28	10/10/90	75°N 15°E	10m	Small iceberg
A-29	10/10/90	75°N 15°E	10m	Small iceberg
A-30	10/10/90	75°N 15°E	10m	Small iceberg
A-31	10/10/90	75°N 15°E	10m	Small iceberg
A-32	10/10/90	75°N 15°E	10m	Small iceberg
A-33	10/10/90	75°N 15°E	10m	Small iceberg
A-34	10/10/90	75°N 15°E	10m	Small iceberg
A-35	10/10/90	75°N 15°E	10m	Small iceberg
A-36	10/10/90	75°N 15°E	10m	Small iceberg
A-37	10/10/90	75°N 15°E	10m	Small iceberg
A-38	10/10/90	75°N 15°E	10m	Small iceberg
A-39	10/10/90	75°N 15°E	10m	Small iceberg
A-40	10/10/90	75°N 15°E	10m	Small iceberg
A-41	10/10/90	75°N 15°E	10m	Small iceberg
A-42	10/10/90	75°N 15°E	10m	Small iceberg
A-43	10/10/90	75°N 15°E	10m	Small iceberg
A-44	10/10/90	75°N 15°E	10m	Small iceberg
A-45	10/10/90	75°N 15°E	10m	Small iceberg
A-46	10/10/90	75°N 15°E	10m	Small iceberg
A-47	10/10/90	75°N 15°E	10m	Small iceberg
A-48	10/10/90	75°N 15°E	10m	Small iceberg
A-49	10/10/90	75°N 15°E	10m	Small iceberg
A-50	10/10/90	75°N 15°E	10m	Small iceberg
A-51	10/10/90	75°N 15°E	10m	Small iceberg
A-52	10/10/90	75°N 15°E	10m	Small iceberg
A-53	10/10/90	75°N 15°E	10m	Small iceberg
A-54	10/10/90	75°N 15°E	10m	Small iceberg
A-55	10/10/90	75°N 15°E	10m	Small iceberg
A-56	10/10/90	75°N 15°E	10m	Small iceberg
A-57	10/10/90	75°N 15°E	10m	Small iceberg
A-58	10/10/90	75°N 15°E	10m	Small iceberg
A-59	10/10/90	75°N 15°E	10m	Small iceberg
A-60	10/10/90	75°N 15°E	10m	Small iceberg
A-61	10/10/90	75°N 15°E	10m	Small iceberg
A-62	10/10/90	75°N 15°E	10m	Small iceberg
A-63	10/10/90	75°N 15°E	10m	Small iceberg
A-64	10/10/90	75°N 15°E	10m	Small iceberg
A-65	10/10/90	75°N 15°E	10m	Small iceberg
A-66	10/10/90	75°N 15°E	10m	Small iceberg
A-67	10/10/90	75°N 15°E	10m	Small iceberg
A-68	10/10/90	75°N 15°E	10m	Small iceberg
A-69	10/10/90	75°N 15°E	10m	Small iceberg
A-70	10/10/90	75°N 15°E	10m	Small iceberg
A-71	10/10/90	75°N 15°E	10m	Small iceberg
A-72	10/10/90	75°N 15°E	10m	Small iceberg
A-73	10/10/90	75°N 15°E	10m	Small iceberg
A-74	10/10/90	75°N 15°E	10m	Small iceberg
A-75	10/10/90	75°N 15°E	10m	Small iceberg
A-76	10/10/90	75°N 15°E	10m	Small iceberg
A-77	10/10/90	75°N 15°E	10m	Small iceberg
A-78	10/10/90	75°N 15°E	10m	Small iceberg
A-79	10/10/90	75°N 15°E	10m	Small iceberg
A-80	10/10/90	75°N 15°E	10m	Small iceberg
A-81	10/10/90	75°N 15°E	10m	Small iceberg
A-82	10/10/90	75°N 15°E	10m	Small iceberg
A-83	10/10/90	75°N 15°E	10m	Small iceberg
A-84	10/10/90	75°N 15°E	10m	Small iceberg
A-85	10/10/90	75°N 15°E	10m	Small iceberg
A-86	10/10/90	75°N 15°E	10m	Small iceberg
A-87	10/10/90	75°N 15°E	10m	Small iceberg
A-88	10/10/90	75°N 15°E	10m	Small iceberg
A-89	10/10/90	75°N 15°E	10m	Small iceberg
A-90	10/10/90	75°N 15°E	10m	Small iceberg
A-91	10/10/90	75°N 15°E	10m	Small iceberg
A-92	10/10/90	75°N 15°E	10m	Small iceberg
A-93	10/10/90	75°N 15°E	10m	Small iceberg
A-94	10/10/90	75°N 15°E	10m	Small iceberg
A-95	10/10/90	75°N 15°E	10m	Small iceberg
A-96	10/10/90	75°N 15°E	10m	Small iceberg
A-97	10/10/90	75°N 15°E	10m	Small iceberg
A-98	10/10/90	75°N 15°E	10m	Small iceberg
A-99	10/10/90	75°N 15°E	10m	Small iceberg
A-100	10/10/90	75°N 15°E	10m	Small iceberg





NORTHERN ICE LIMIT 15 MAR 90

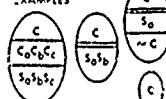
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths
 C₁C₂C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 S₁S₂S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
 -C = Concentration of ice within area(s) of strips and patches.

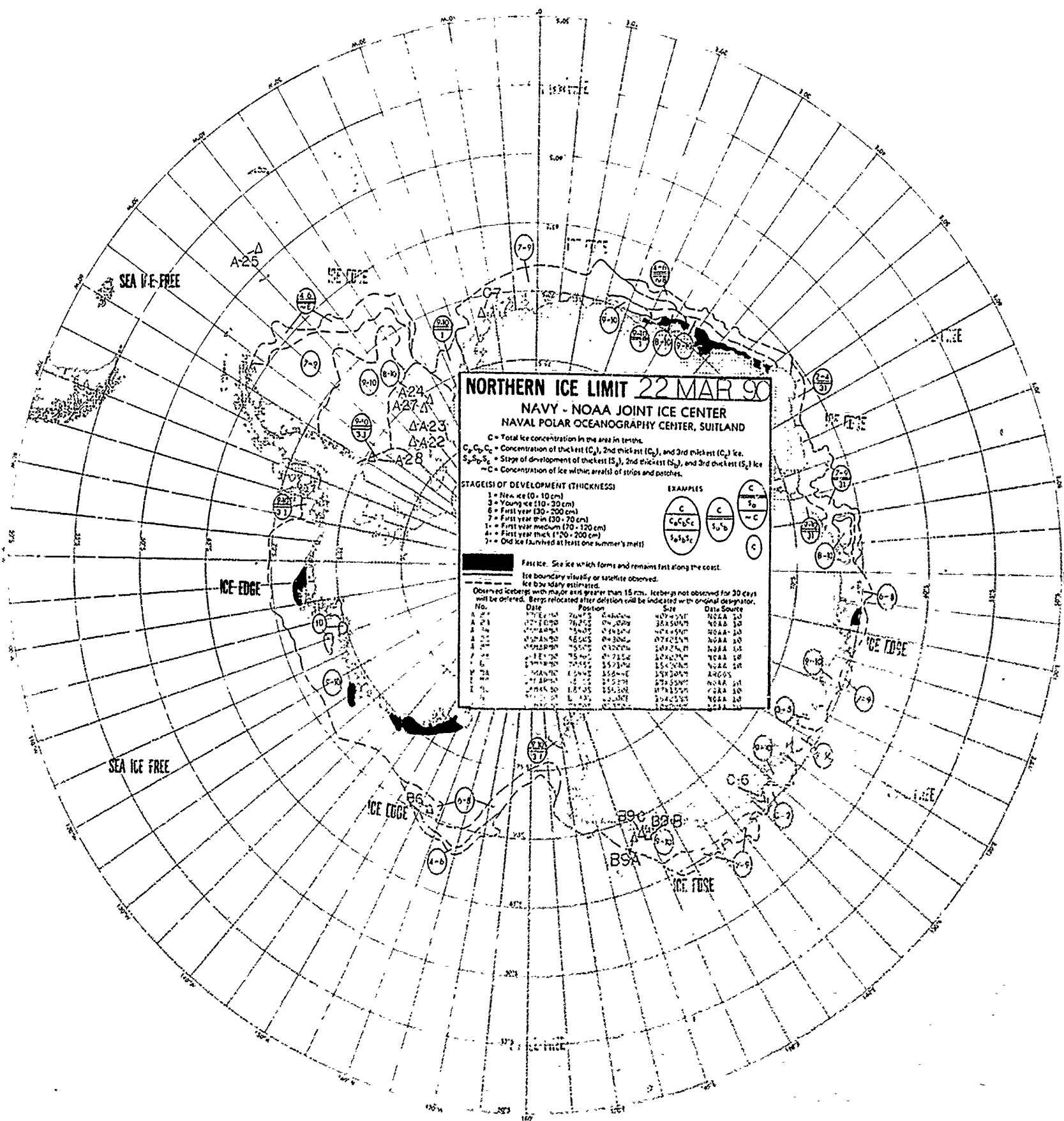
STAGES OF DEVELOPMENT (THICKNESS)

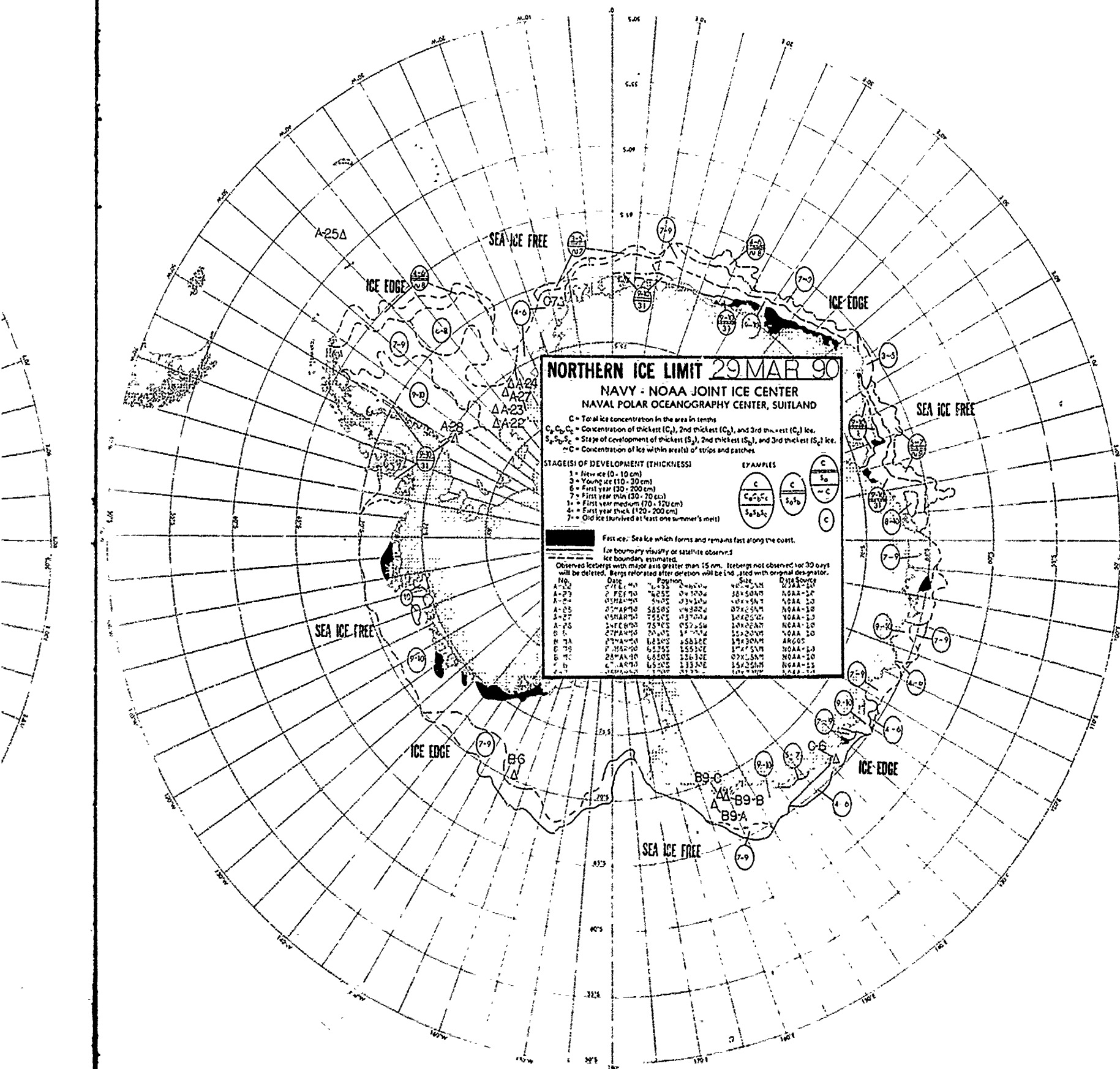
- 1 = New ice (10 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year thin (30 - 70 cm)
- 4 = First year medium (70 - 120 cm)
- 5 = First year thick (120 - 200 cm)
- 6 = Old ice (survived at least one summer's melt)

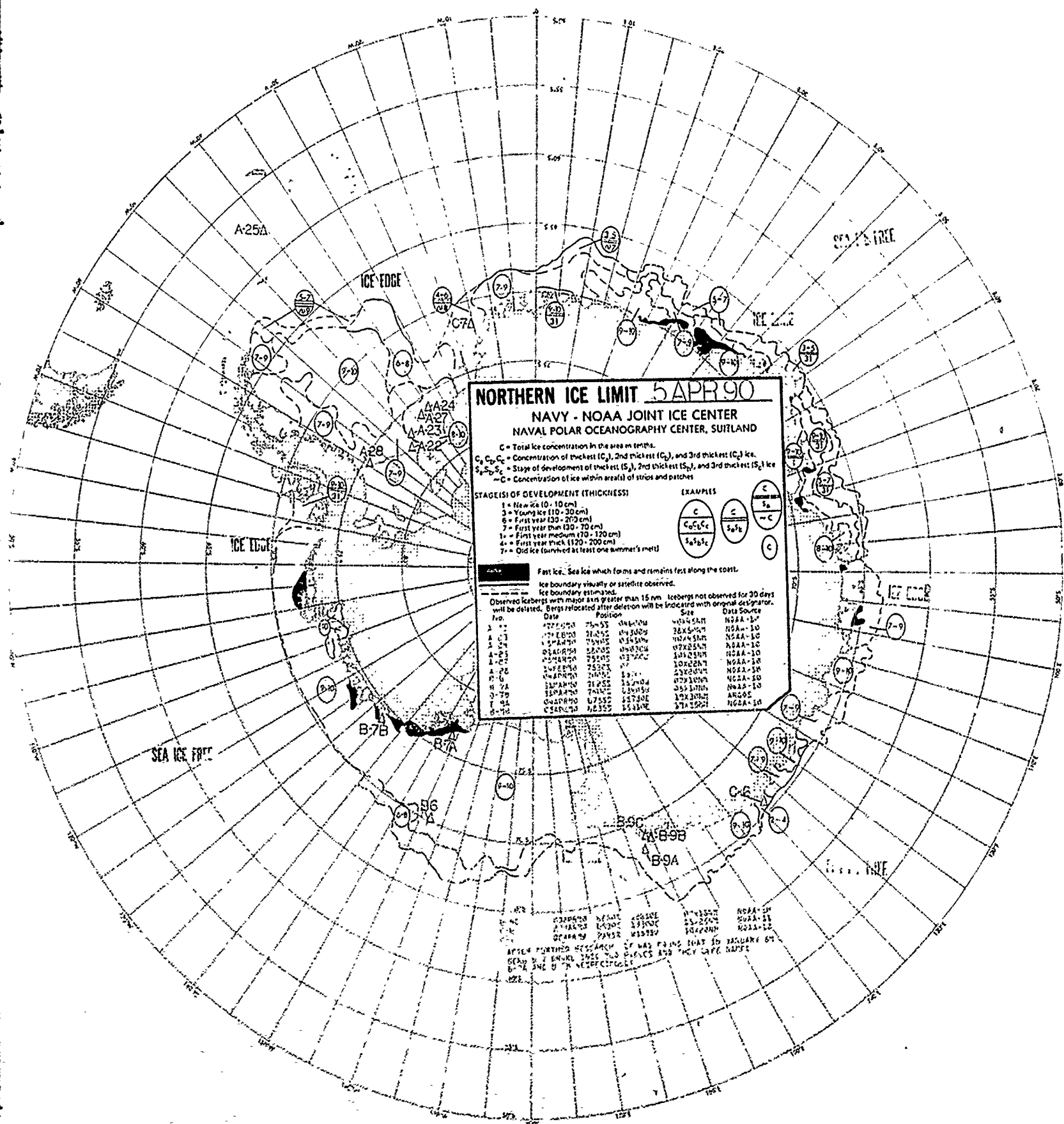
EXAMPLES



	Fast ice - Sea ice which forms and remains fast along the coast.			
	Ice boundary visually or satellite observed			
	Ice boundary estimated.			
	Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Bergs relocated after deletion will be indicated with original designator.			
No.	Date	Position	Size	Data Source
A-1	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-2	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-3	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-4	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-5	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-6	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-7	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-8	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-9	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-10	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-11	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-12	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-13	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-14	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-15	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-16	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-17	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-18	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-19	15 MAR 90	75°N 150°W	100 x 100	NOAA
A-20	15 MAR 90	75°N 150°W	100 x 100	NOAA







NORTHERN ICE LIMIT 5 APR 90

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
 C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
 S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
 -C = Concentration of ice within areas of strips and patches

STAGE(S) OF DEVELOPMENT (THICKNESS)

- 1 = New ice (0 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 120 cm)
- 4 = First year thin (120 - 150 cm)
- 5 = First year medium (150 - 170 cm)
- 6 = First year thick (170 - 200 cm)
- 7 = Old ice (survived at least one summer's melt)

EXAMPLES

$\frac{C}{C_1 C_2 C_3}$
 $\frac{S_1 S_2 S_3}{-C}$

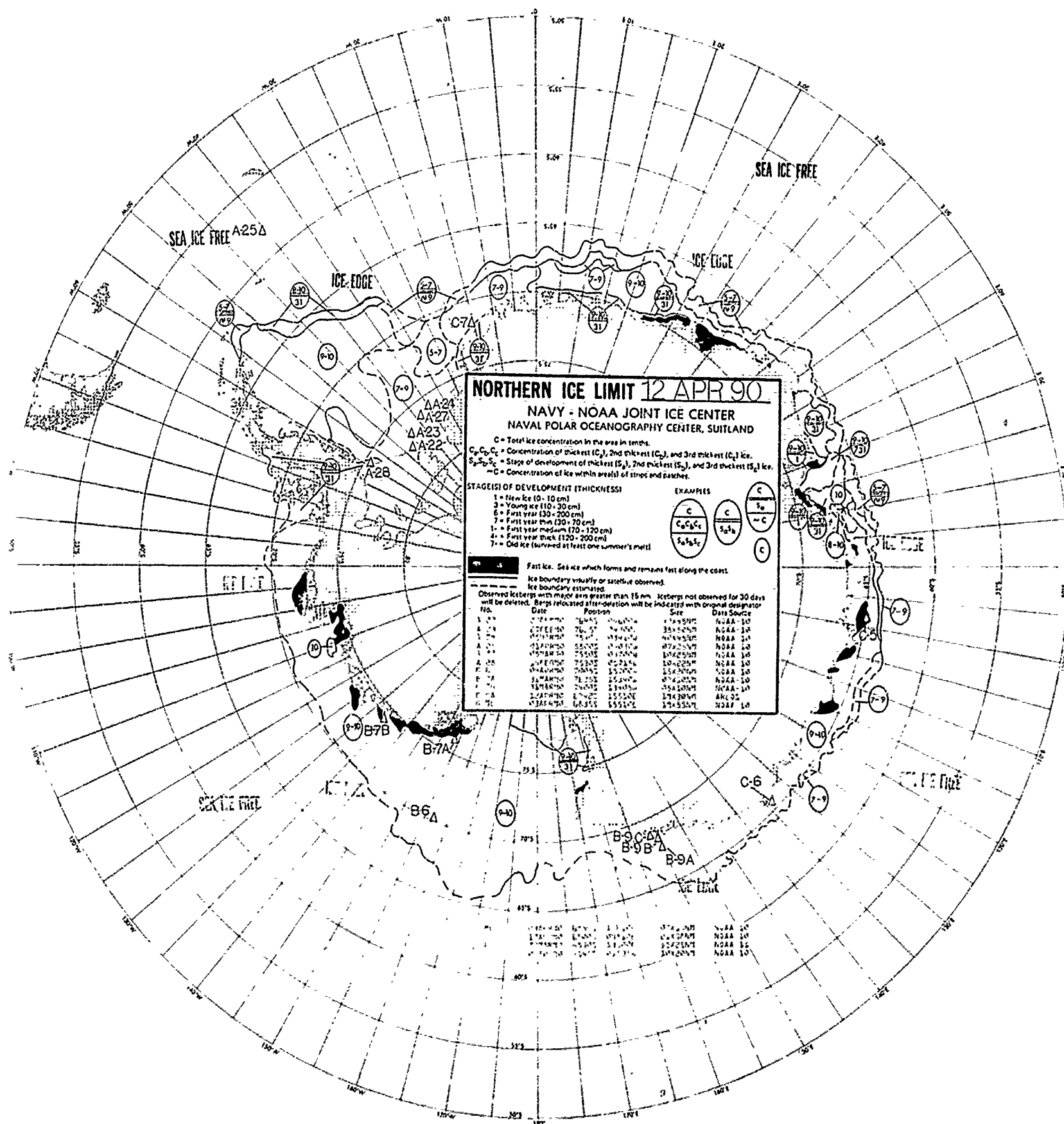
$\frac{C}{S_1 S_2}$
 $\frac{C}{-C}$

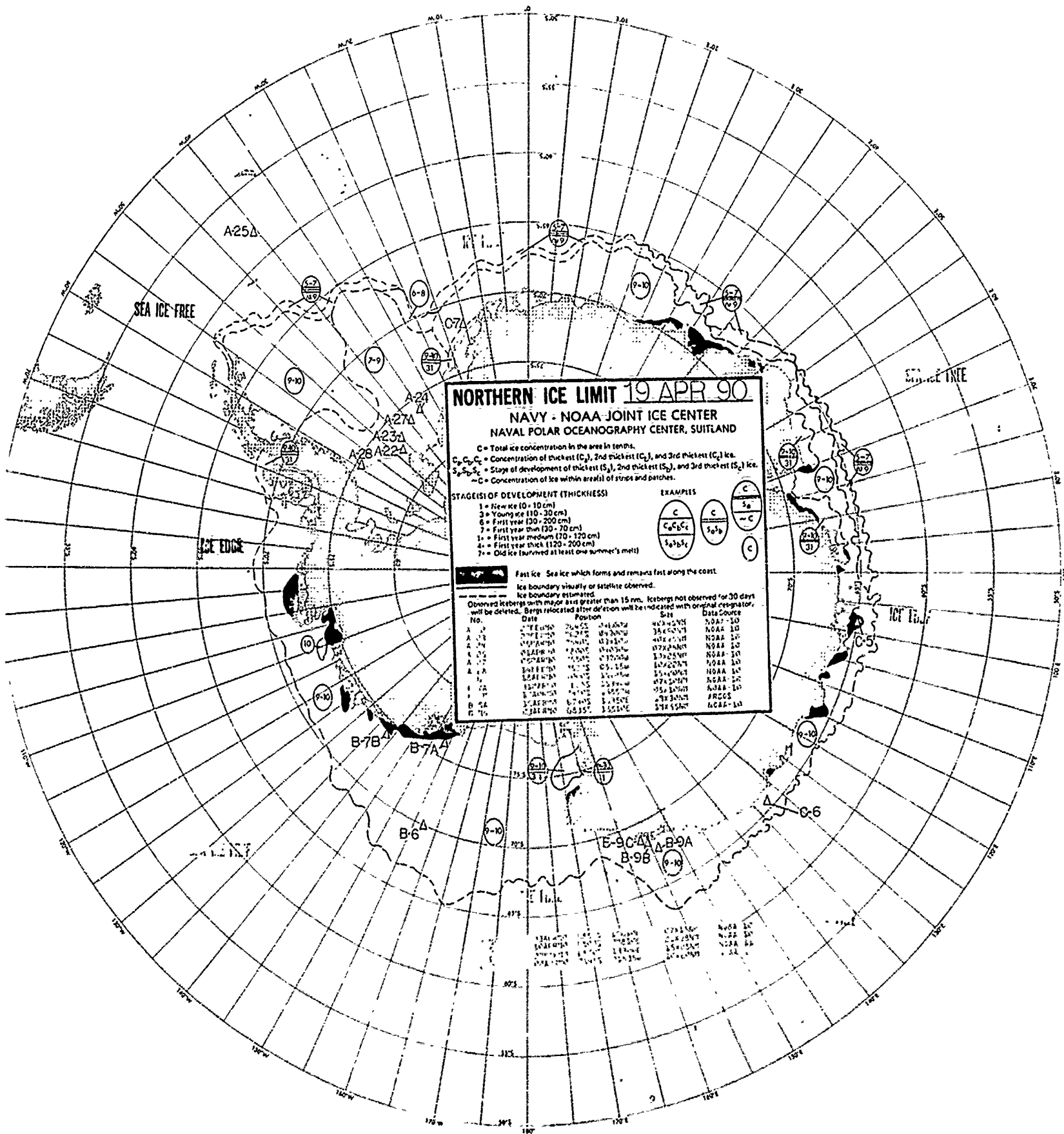
$\frac{C}{S_1}$
 $\frac{C}{-C}$

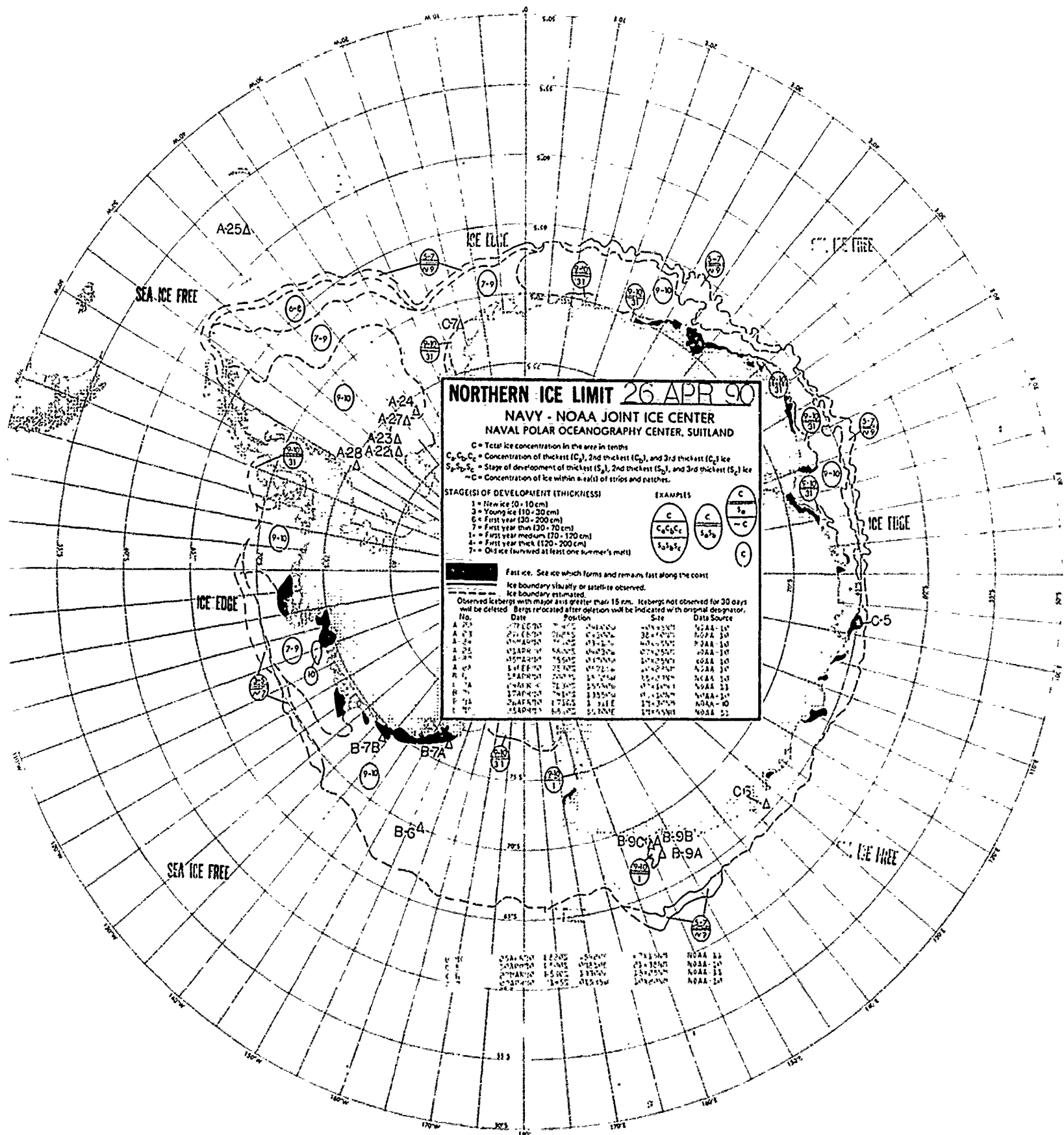
Fast ice. Sea ice which forms and remains fast along the coast.
 Ice boundary visually or satellite observed.
 Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Bergs relocated after deletion will be indicated with original designator.

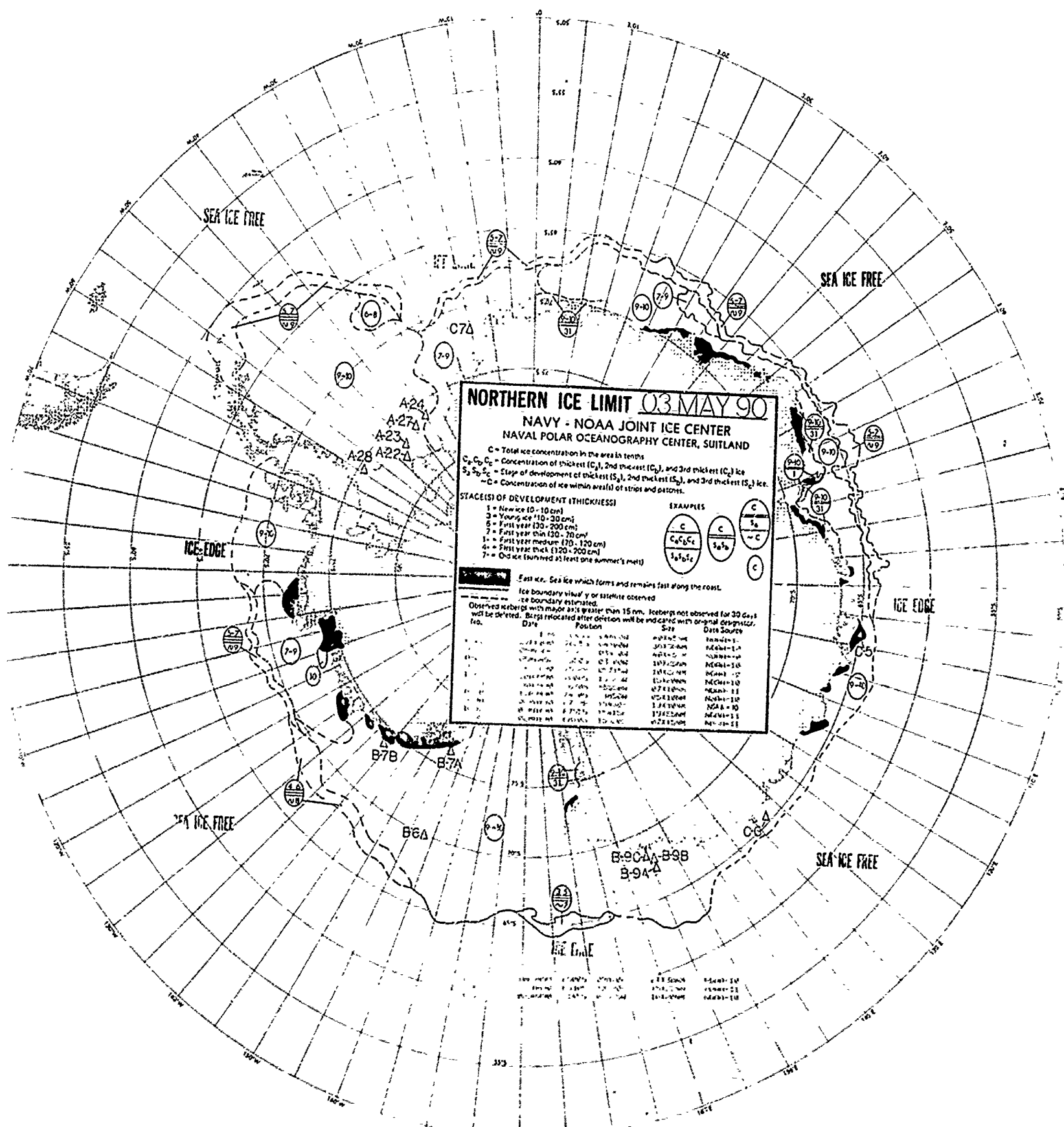
No.	Date	Position	Size	Data Source
A-1	27 FEB 90	75°55' 04N 100°	40x45 NM	NOAA-10
A-2	27 FEB 90	71°55' 04N 100°	30x40 NM	NOAA-10
A-3	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-4	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-5	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-6	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-7	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-8	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-9	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-10	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-11	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-12	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-13	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-14	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-15	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-16	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-17	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-18	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-19	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-20	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-21	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-22	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-23	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-24	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-25	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-26	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-27	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-28	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-29	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-30	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-31	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-32	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-33	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-34	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-35	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-36	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-37	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-38	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-39	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-40	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-41	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-42	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-43	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-44	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-45	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-46	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-47	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-48	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-49	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-50	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-51	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-52	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-53	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-54	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-55	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-56	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-57	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-58	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-59	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-60	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-61	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-62	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-63	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-64	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-65	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-66	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-67	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-68	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-69	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-70	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-71	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-72	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-73	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-74	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-75	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-76	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-77	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-78	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-79	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-80	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-81	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-82	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-83	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-84	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-85	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-86	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-87	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-88	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-89	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-90	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-91	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-92	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-93	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-94	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-95	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-96	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-97	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-98	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-99	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10
A-100	27 FEB 90	75°55' 04N 100°	100x150 NM	NOAA-10

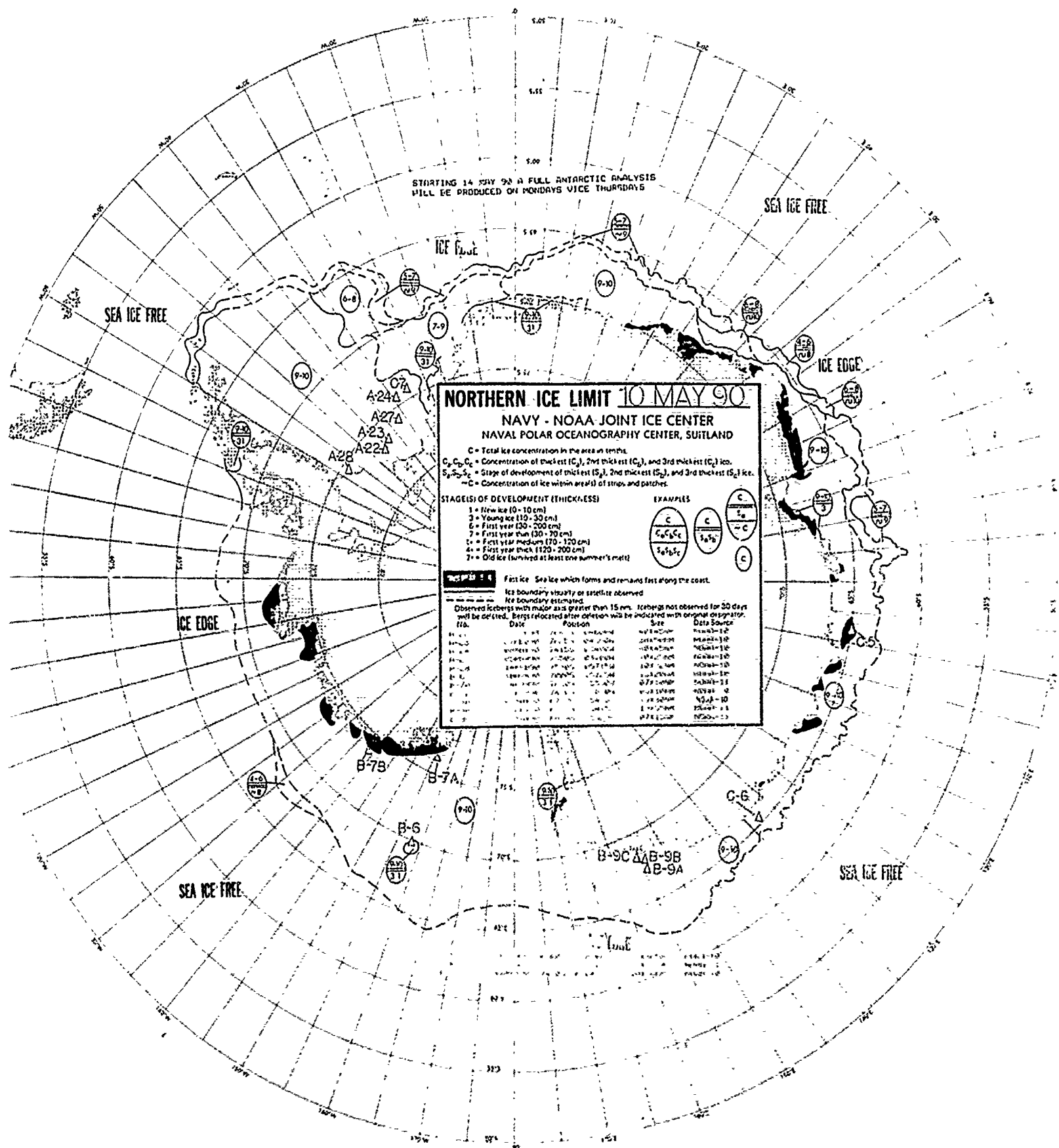
APR 14 1990 10:00 AM
 DATA FROM 1000 HRS TO 1800 HRS
 DATA FROM 1800 HRS TO 0600 HRS
 DATA FROM 0600 HRS TO 1800 HRS
 DATA FROM 1800 HRS TO 0600 HRS

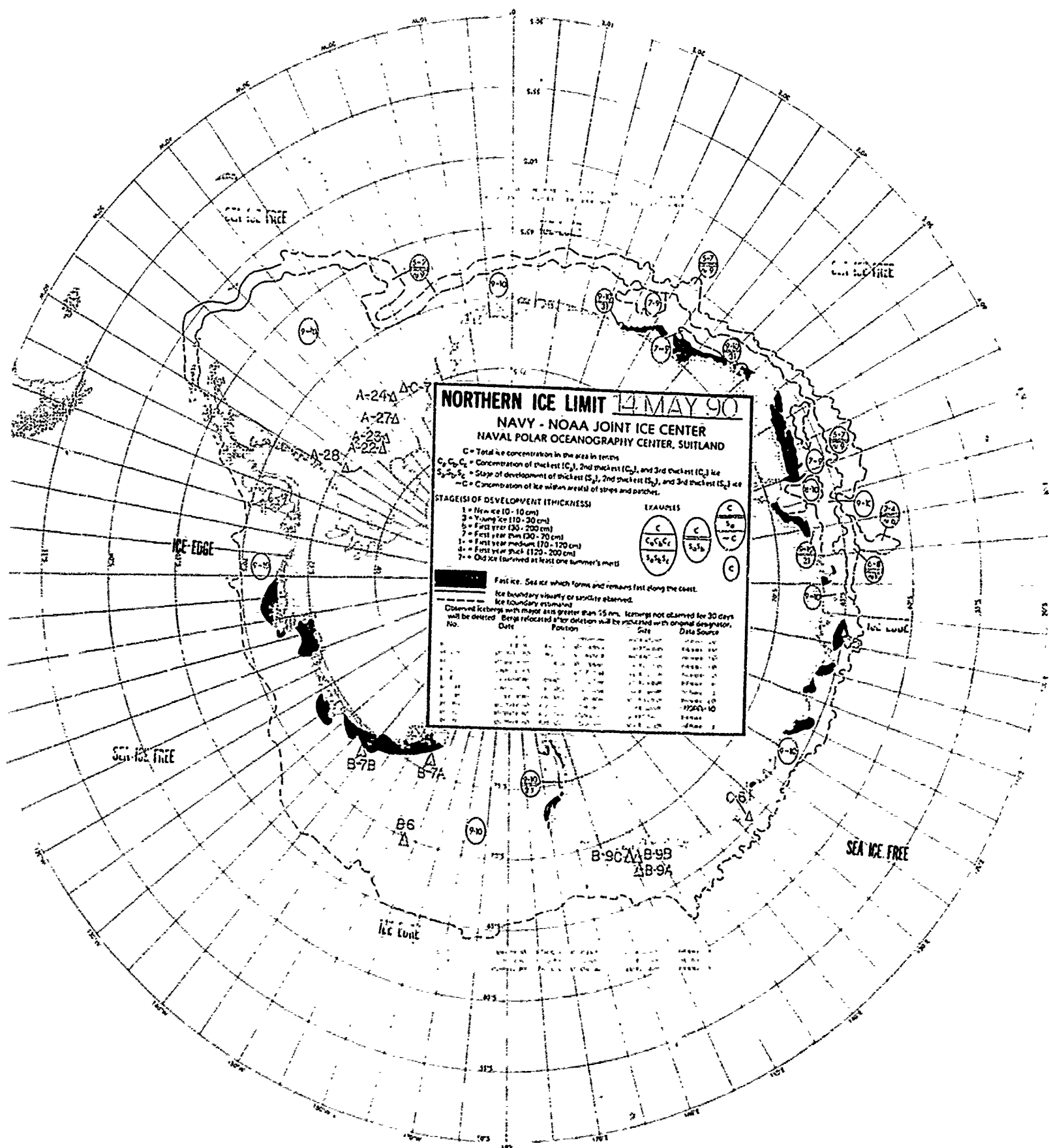


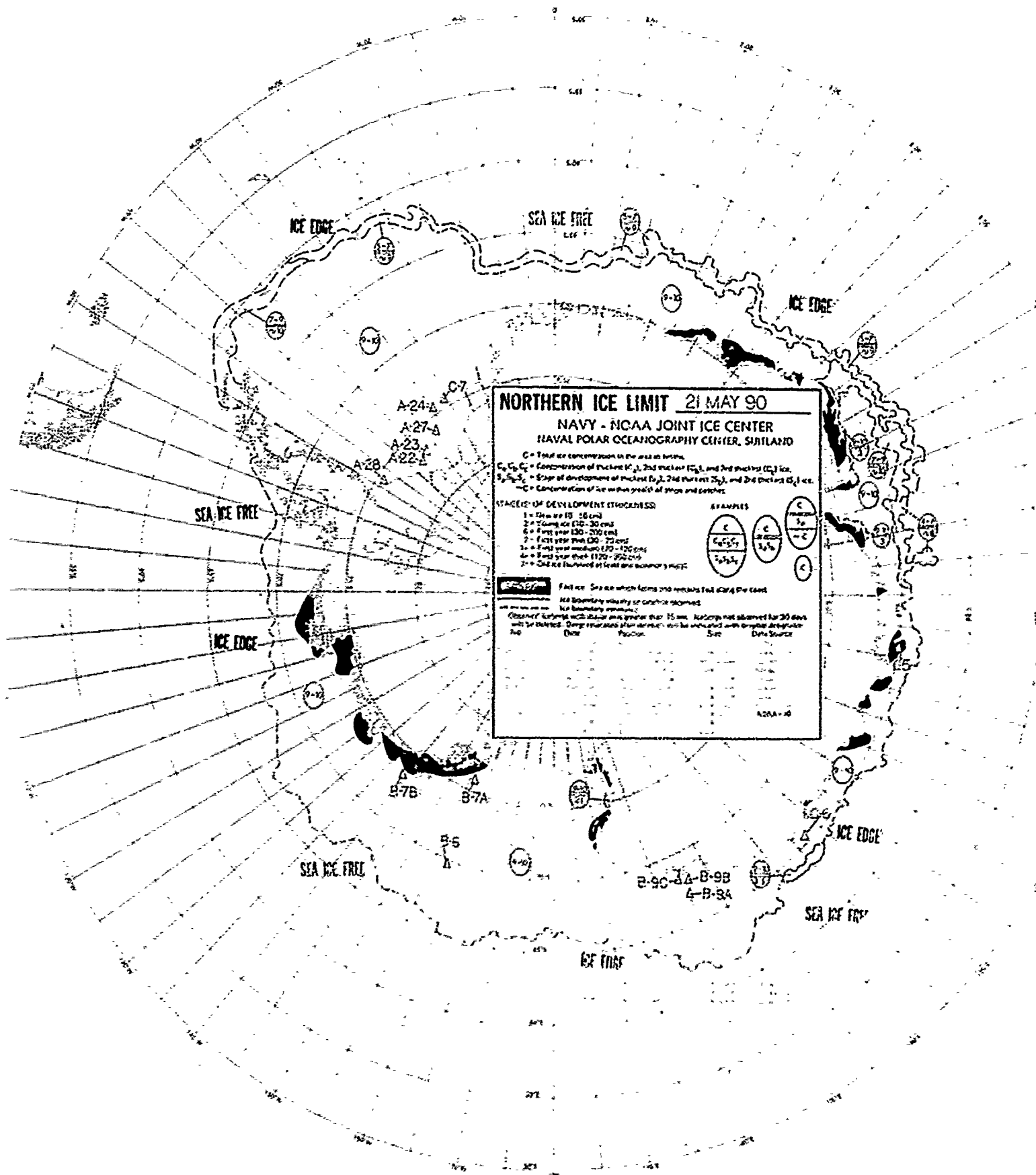


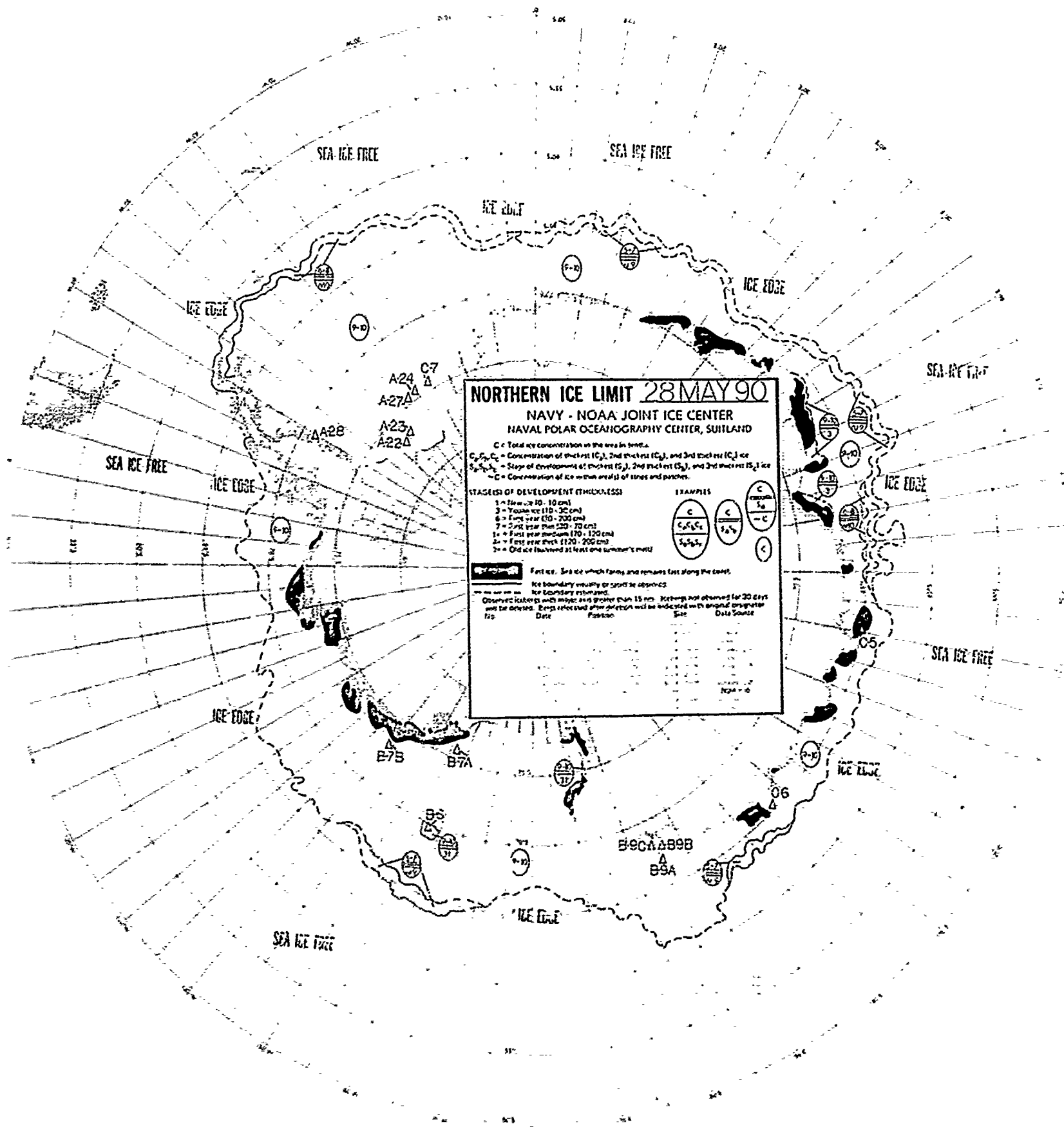


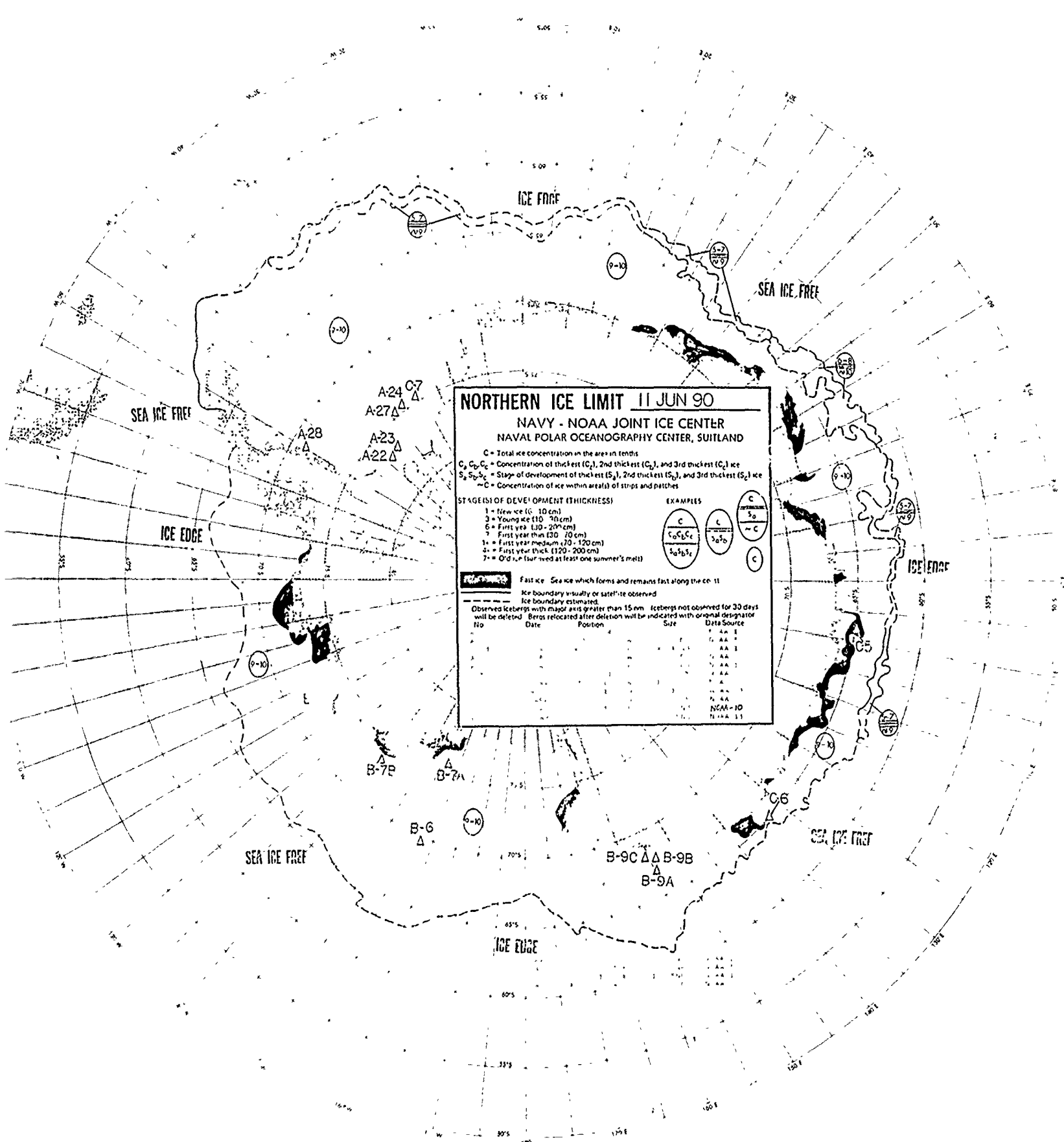












NORTHERN ICE LIMIT 11 JUN 90

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths
 C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice
 S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice
 ~C = Concentration of ice within area(s) of strips and patches

STAGE(S) OF DEVELOPMENT (THICKNESS)

- 1 = New ice (< 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 200 cm)
- 4 = First year thin (30 - 70 cm)
- 5 = First year medium (70 - 120 cm)
- 6 = First year thick (120 - 200 cm)
- 7 = Old ice (survived at least one summer's melt)

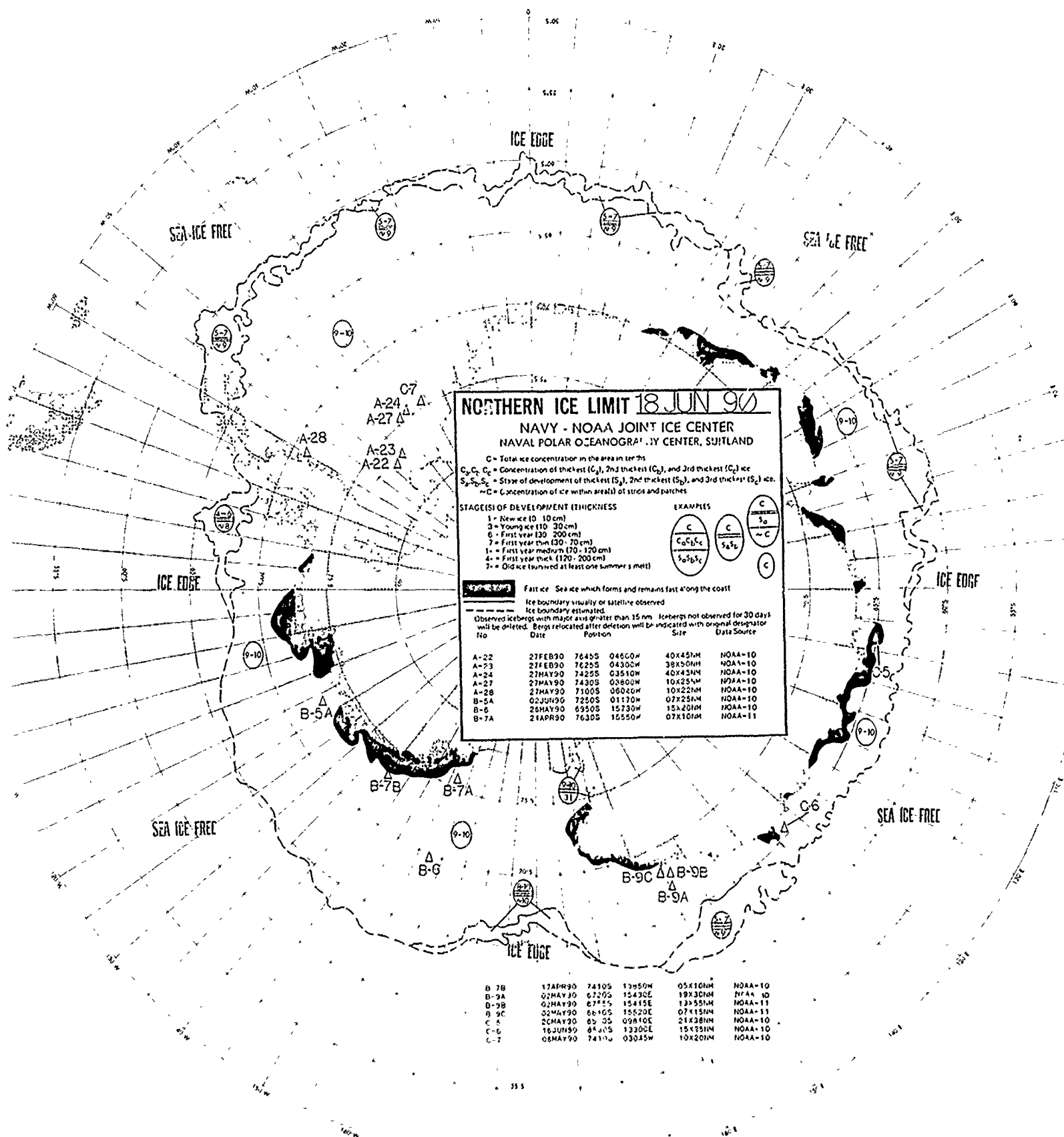
EXAMPLES

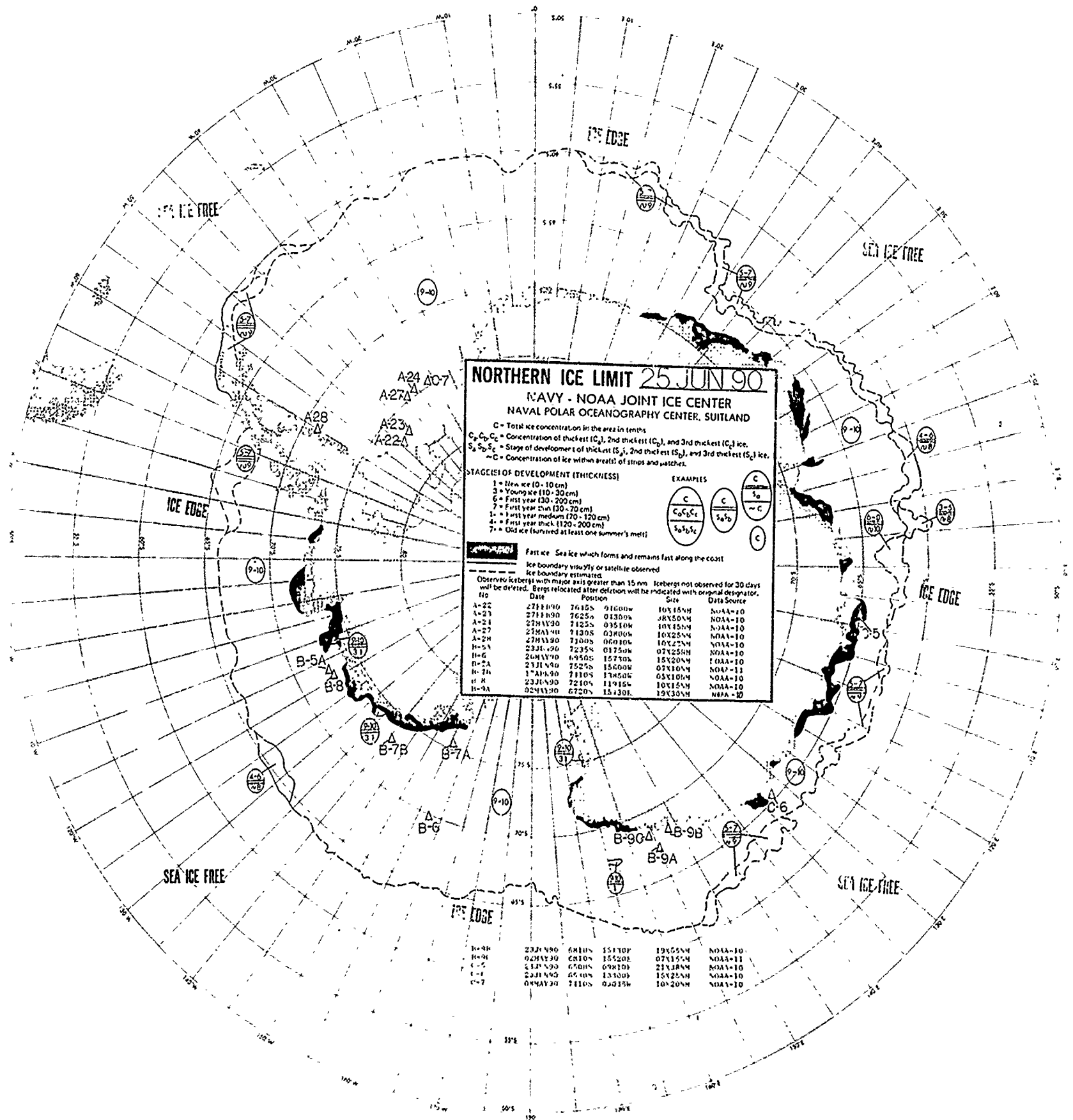
$\frac{C}{S_1 S_2 S_3}$	$\frac{C}{S_1 S_2}$	$\frac{C}{S_1}$	$\frac{C}{S_2}$	$\frac{C}{S_3}$	$\frac{C}{S_1 S_2 S_3}$	$\frac{C}{S_1 S_2}$	$\frac{C}{S_1}$	$\frac{C}{S_2}$	$\frac{C}{S_3}$
$\frac{C}{S_1 S_2 S_3}$	$\frac{C}{S_1 S_2}$	$\frac{C}{S_1}$	$\frac{C}{S_2}$	$\frac{C}{S_3}$	$\frac{C}{S_1 S_2 S_3}$	$\frac{C}{S_1 S_2}$	$\frac{C}{S_1}$	$\frac{C}{S_2}$	$\frac{C}{S_3}$

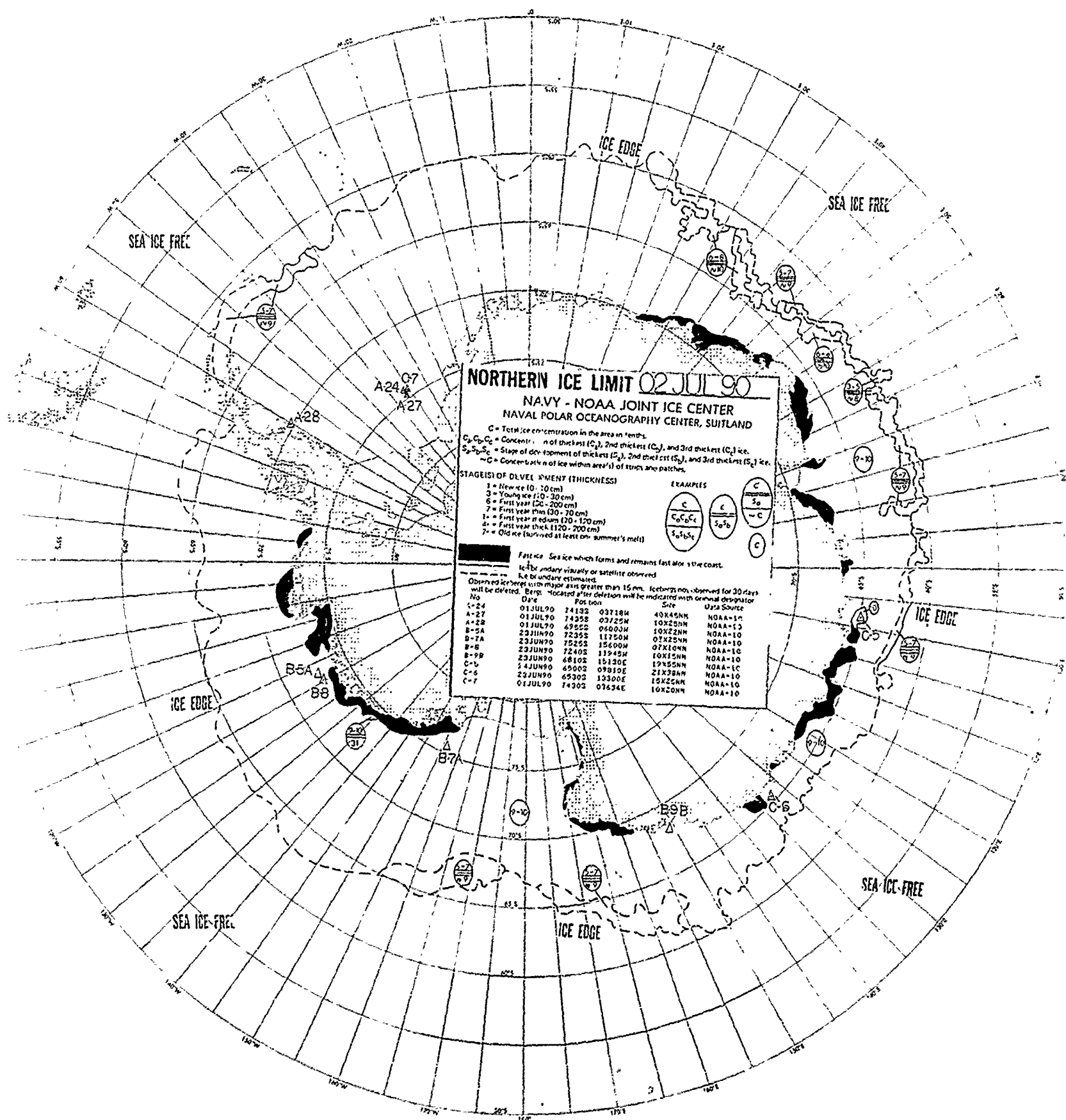
Legend:

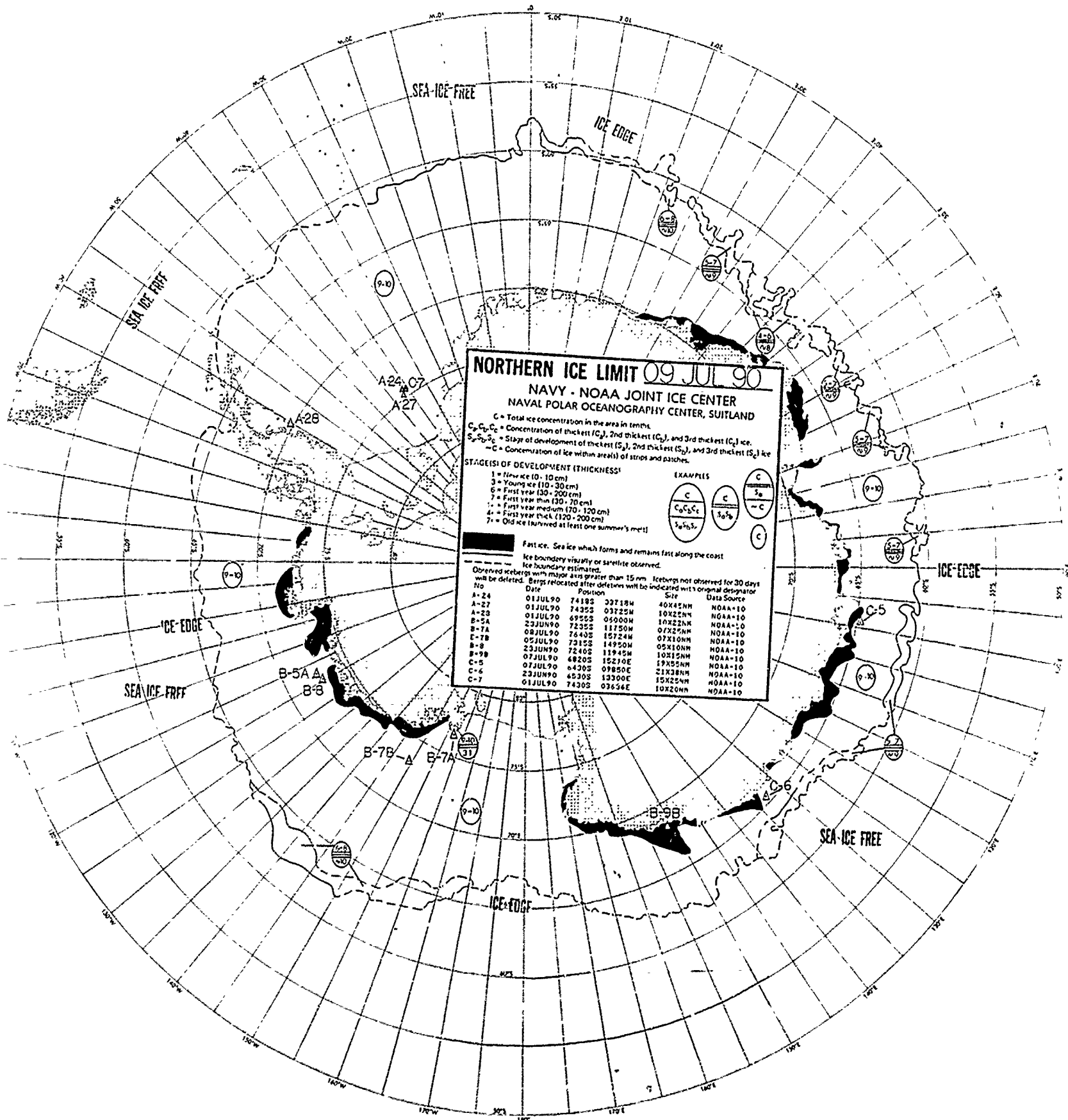
- Fast ice: Sea ice which forms and remains fast along the coast
- Ice boundary: Visually or satellite observed
- Ice boundary: Estimated
- Observed icebergs with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Berms relocated after deletion will be indicated with original designator

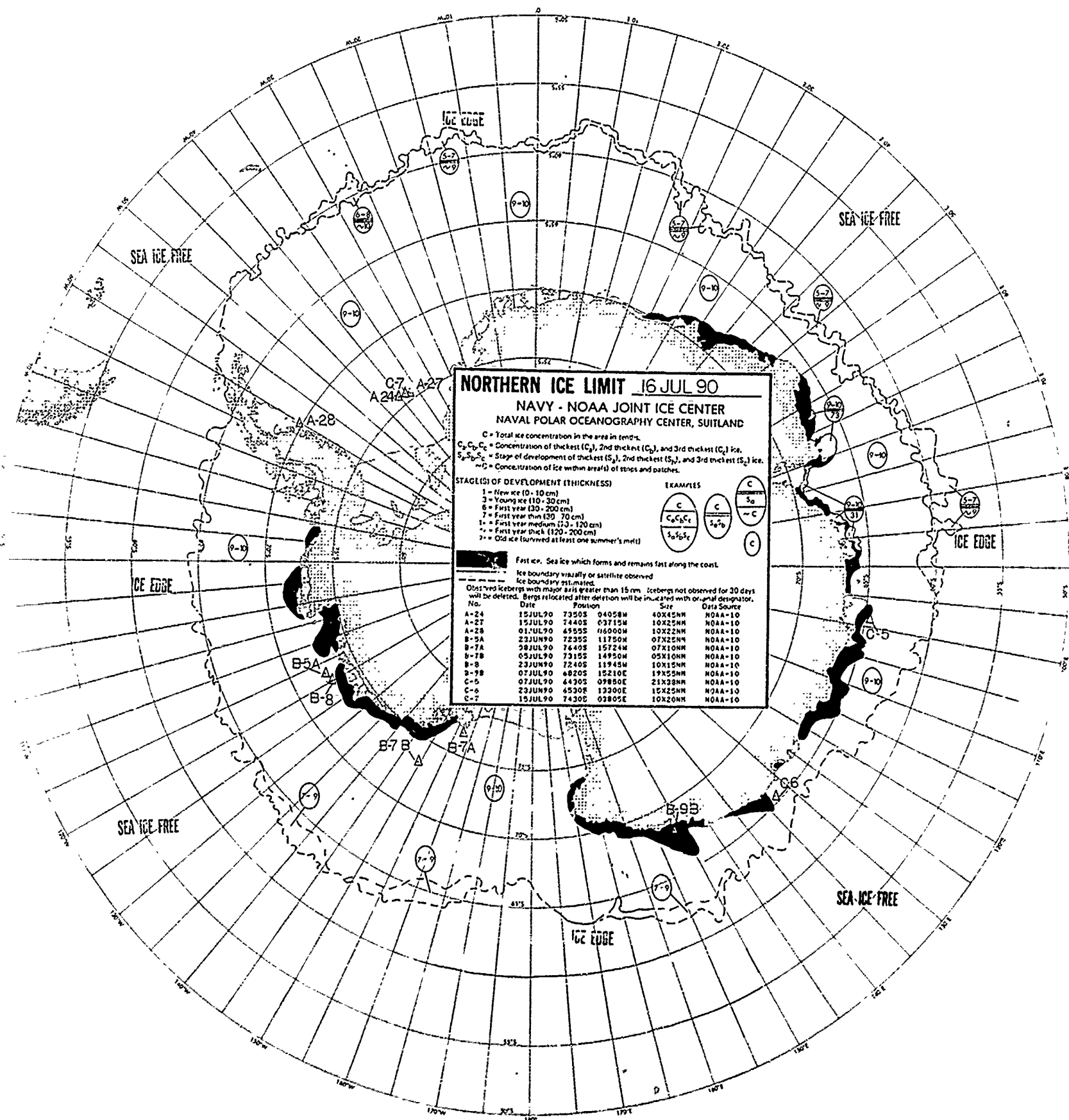
No.	Date	Position	Size	Data Source
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2	AA			AA
3	AA			AA
4	AA			AA
5	AA			AA
6	AA			AA
7	AA			AA
8	AA			AA
9	AA			AA
10	AA			AA
11	AA			AA
12	AA			AA
13	AA			AA
14	AA			AA
15	AA			AA
16	AA			AA
17	AA			AA
18	AA			AA
19	AA			AA
20	AA			AA
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100	AA			AA

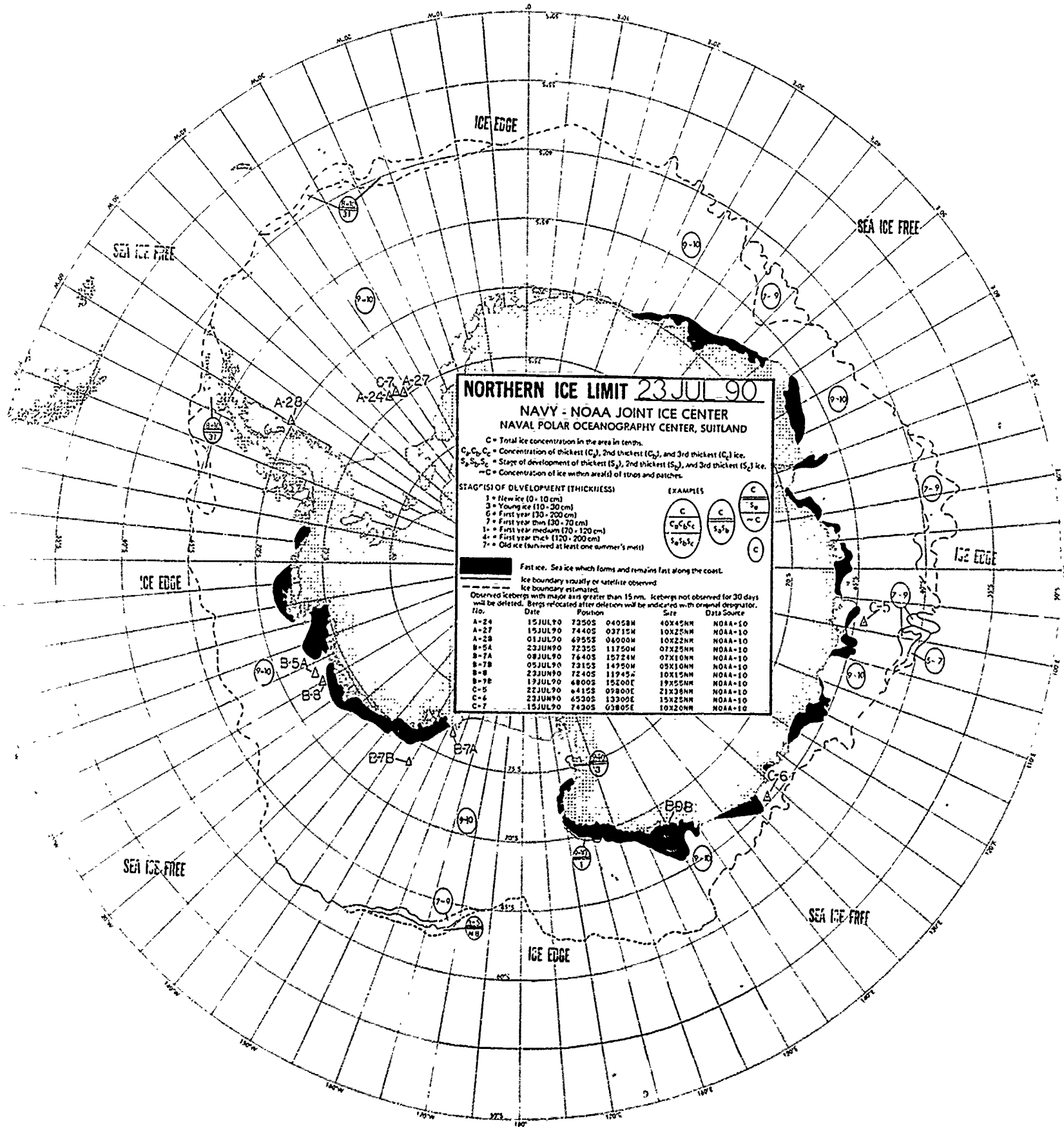


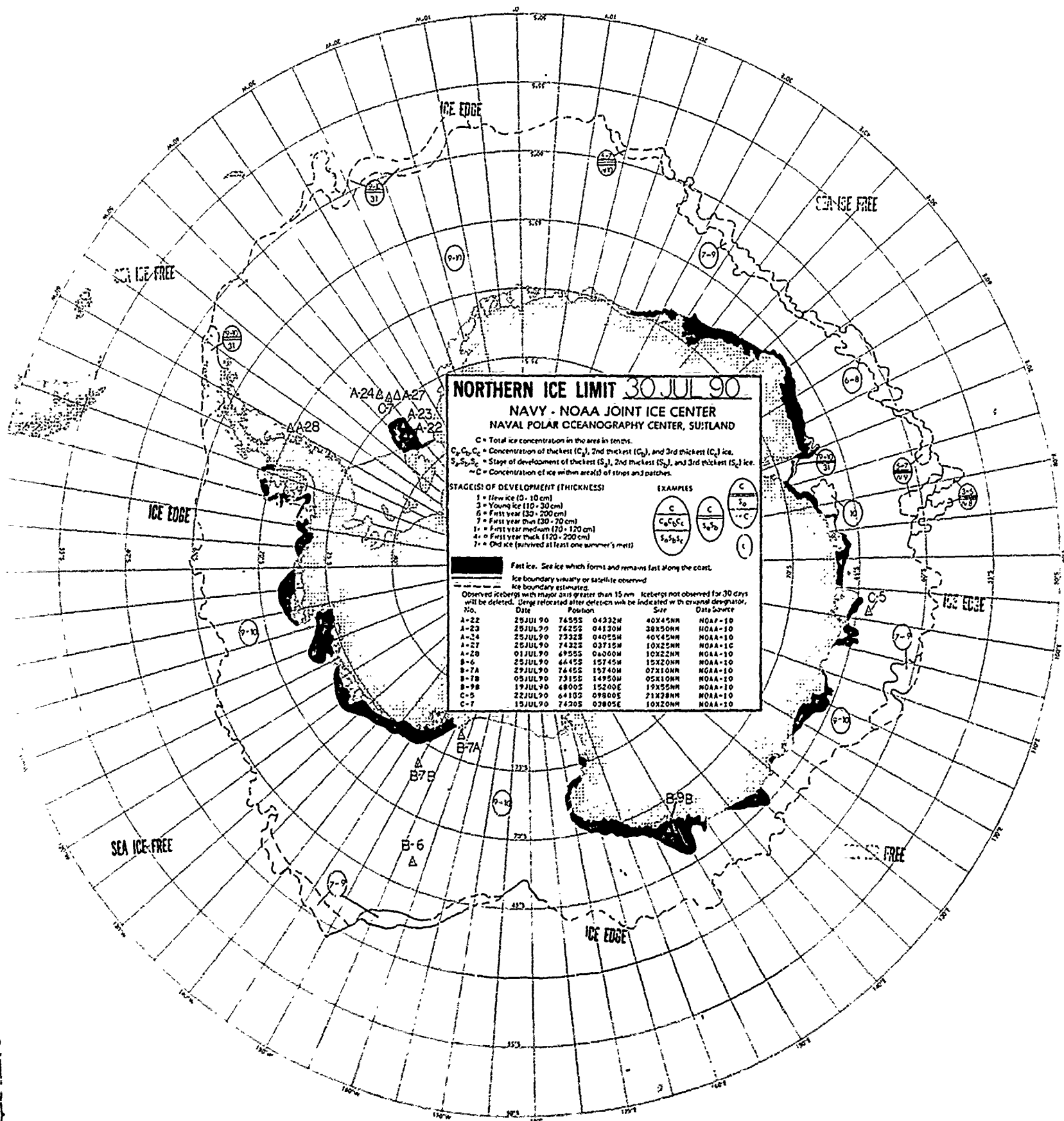


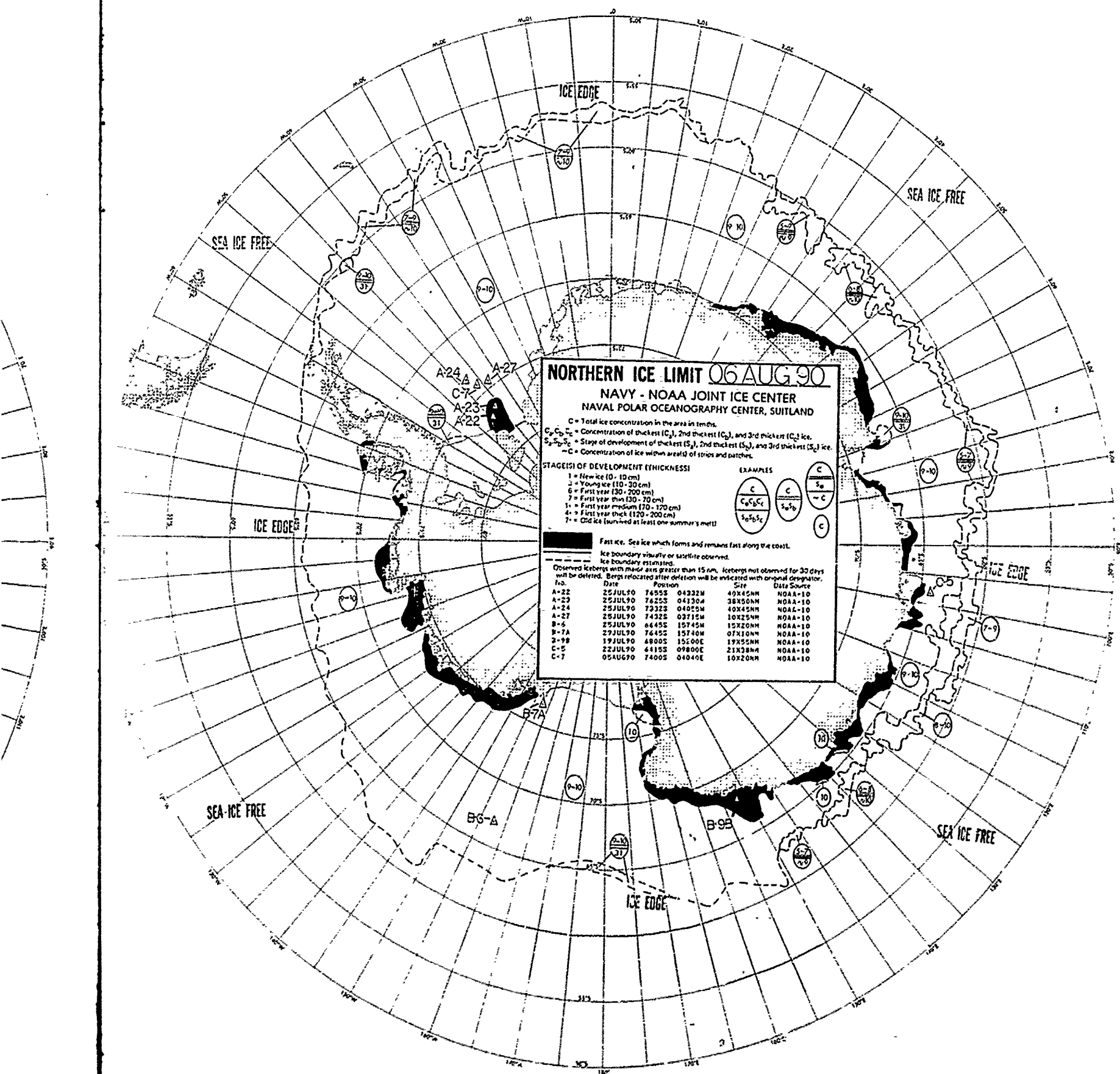


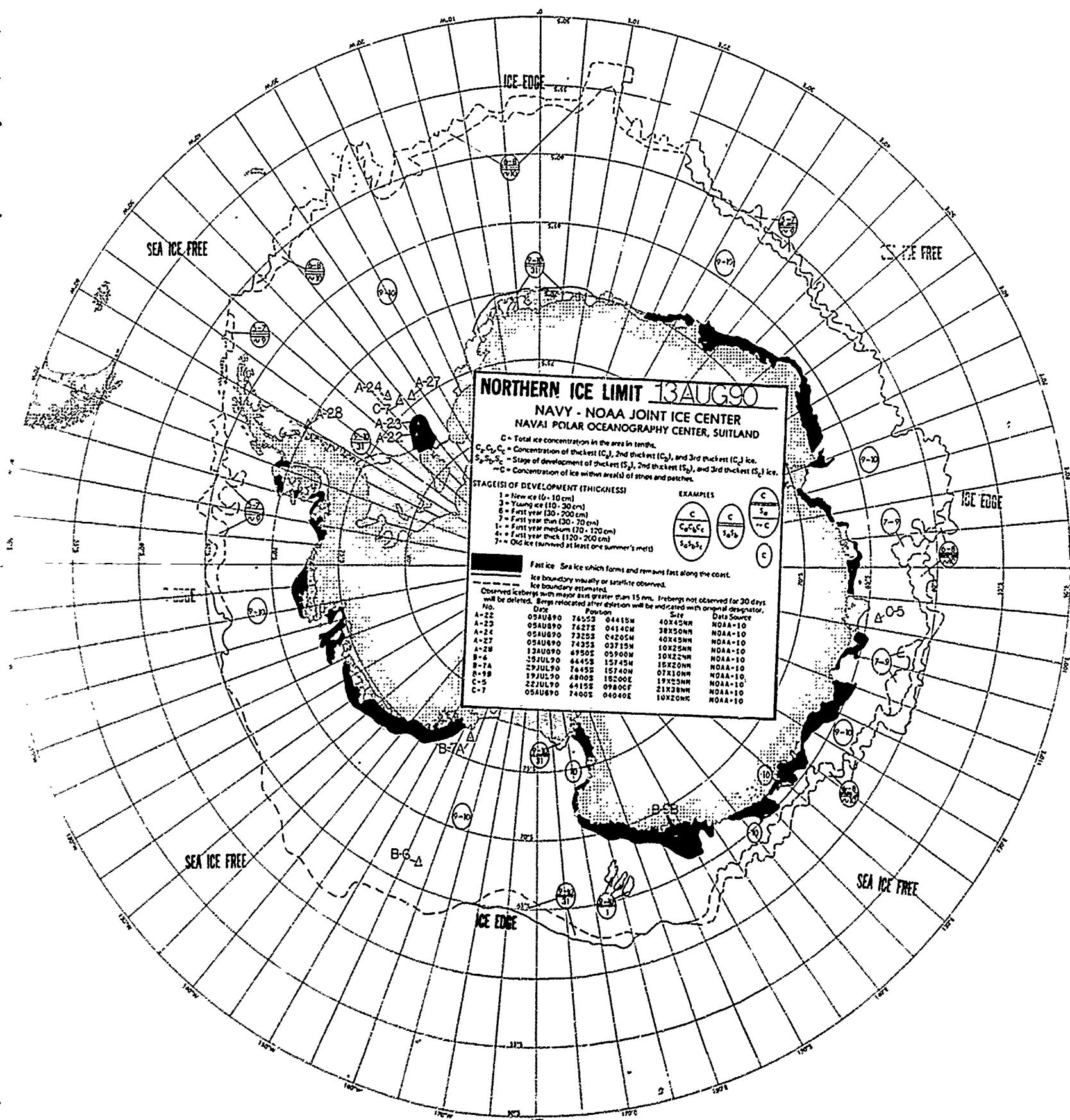


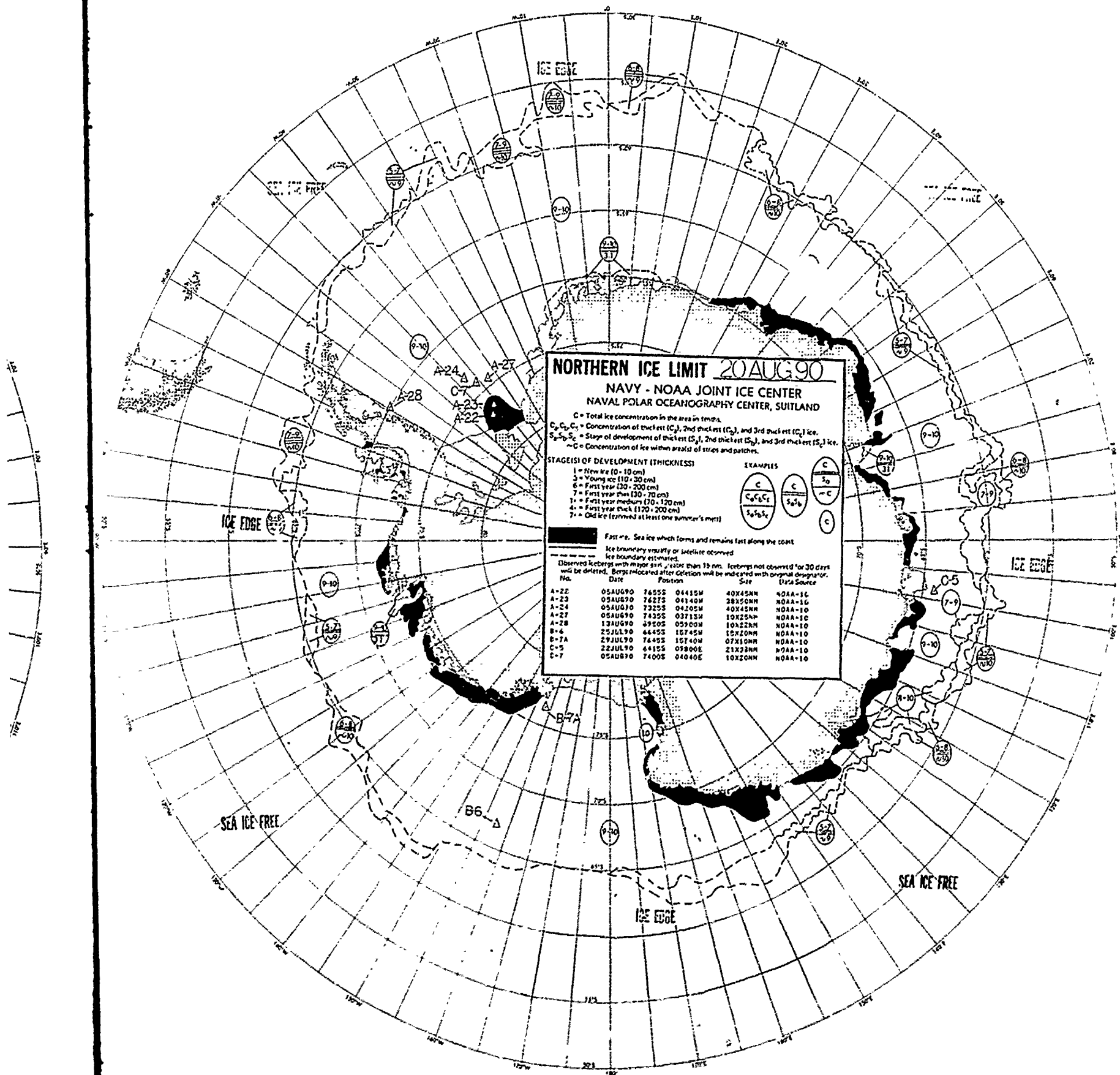


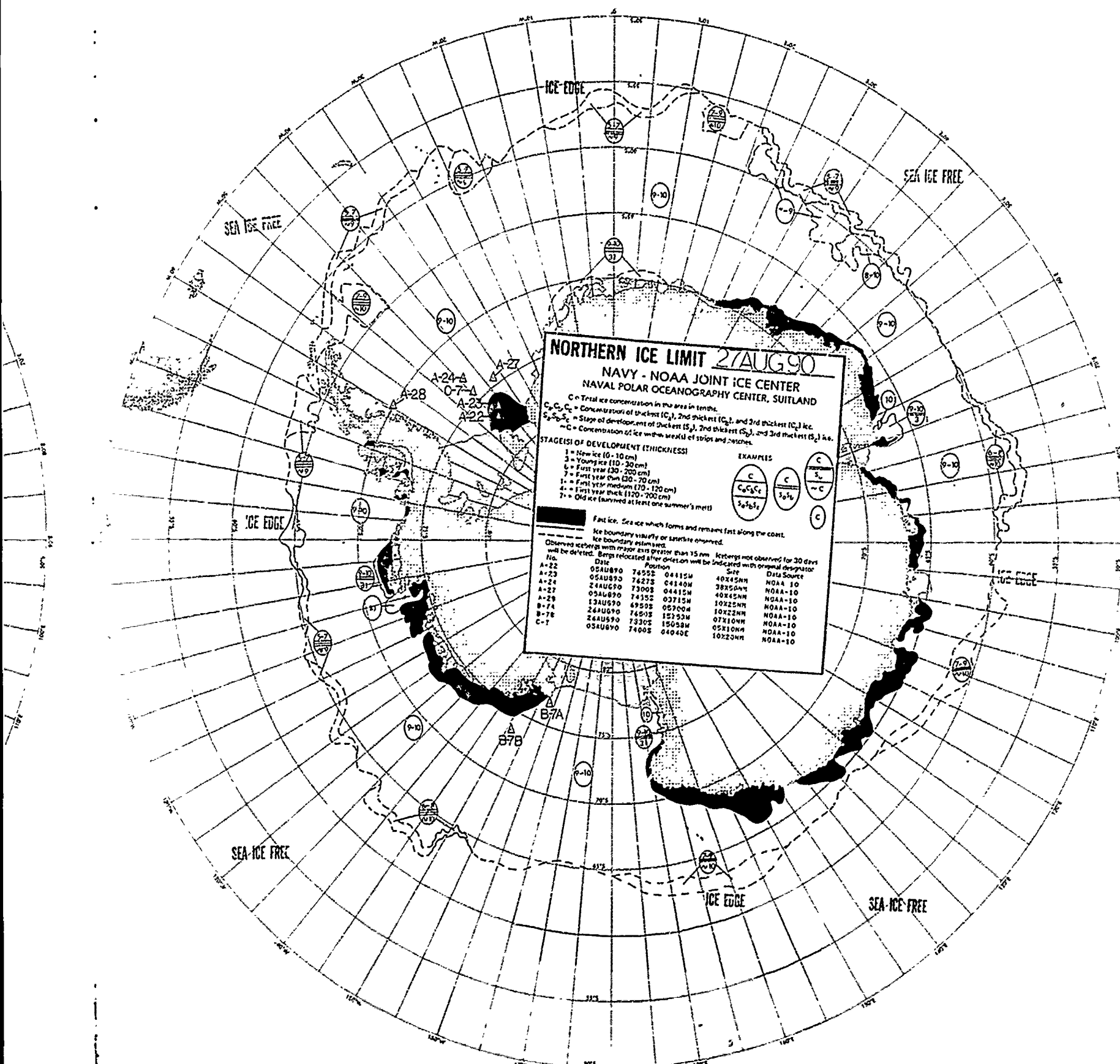












NORTHERN ICE LIMIT 27AUG90

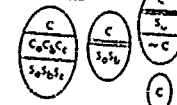
NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
C₁C₂C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁S₂S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
-C = Concentration of ice within width of strip and patches.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (10 - 30 cm)
- 2 = Young ice (30 - 70 cm)
- 3 = First year thin (70 - 120 cm)
- 4 = First year medium (120 - 170 cm)
- 5 = First year thick (170 - 200 cm)
- 6 = Old ice (survived at least one summer's melt)

EXAMPLES

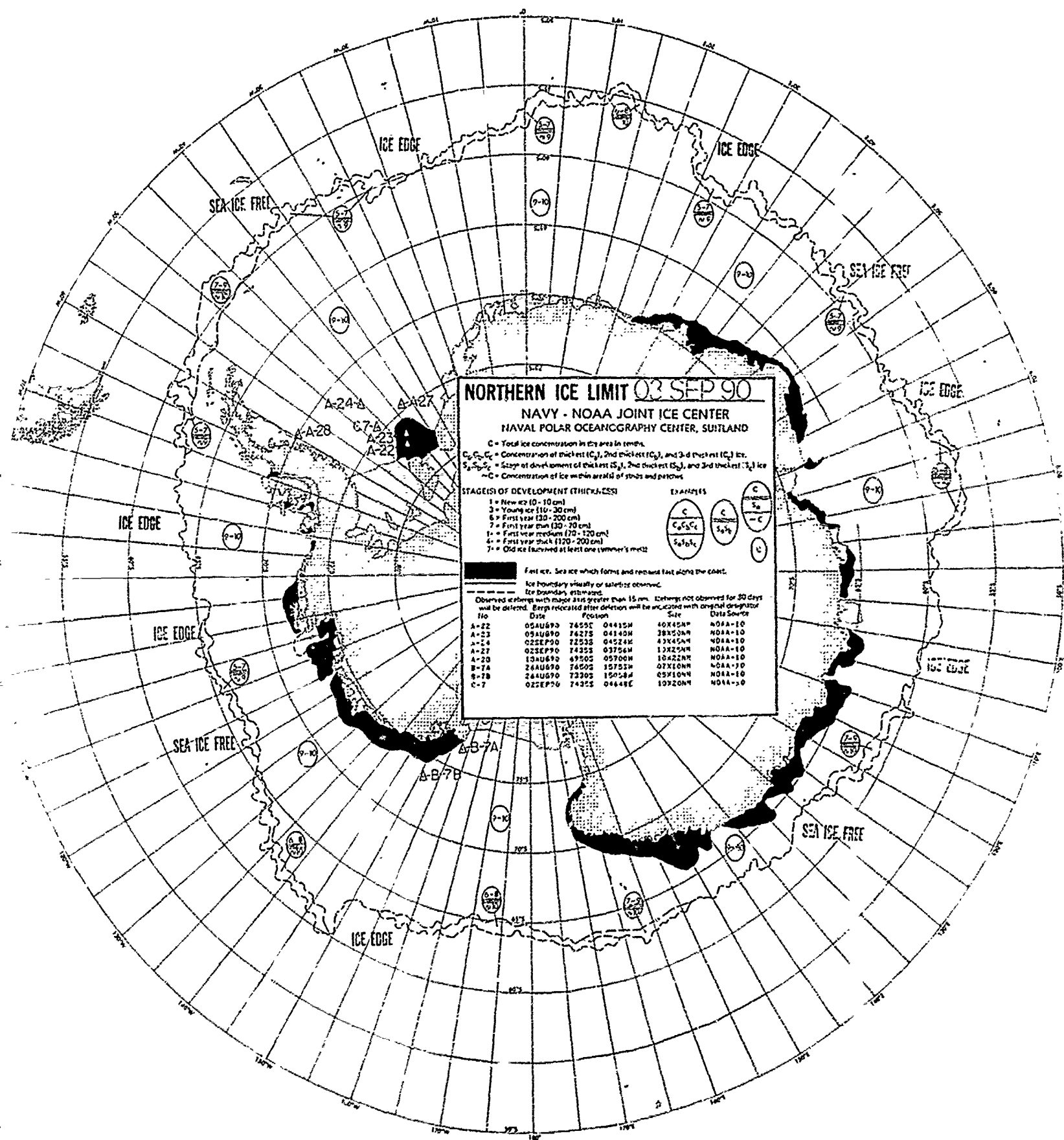


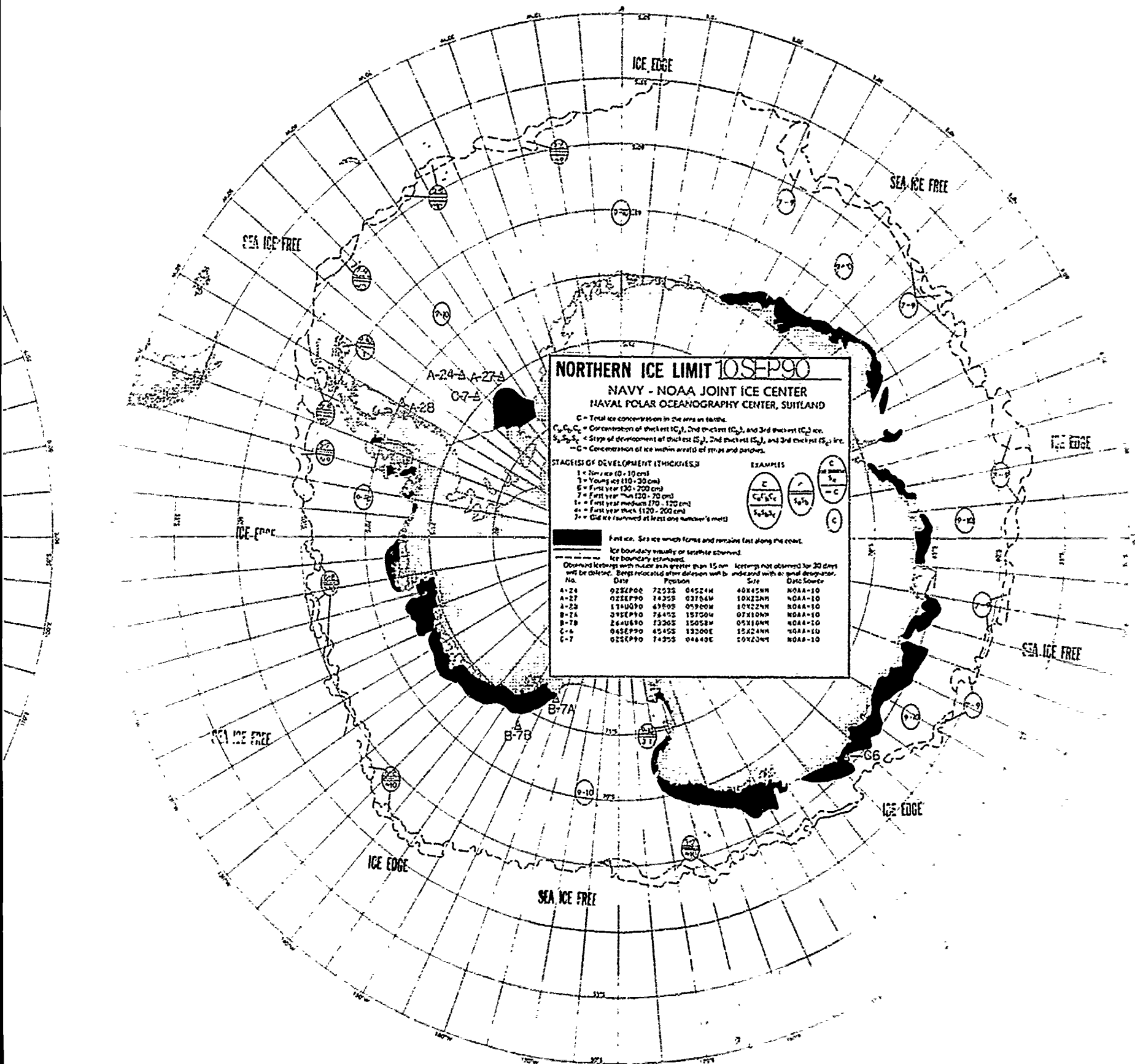
Fast ice. See ice which forms and remains fast along the coast.

Ice boundary visibility or signature assumed.

Observations with major axis greater than 15 nm. Icebergs not observed for 30 days will be deleted. Berms relocated after orientation will be indicated with original designation.

No.	Date	Position	Data Source
A-22	05AUG90	7455S 04415W	NOAA-10
A-23	05AUG90	7427S 04410W	NOAA-10
A-24	24AUG90	7300S 04415W	NOAA-10
A-27	05AUG90	7435S 03715W	NOAA-10
A-28	13AUG90	6950S 05700W	NOAA-10
B-7A	24AUG90	7450S 15353W	NOAA-10
B-7B	24AUG90	7330S 15058W	NOAA-10
C-7	03AUG90	7400S 04040E	NOAA-10





NORTHERN ICE LIMIT 10 SEP 90

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
 C_1, C_2, C_3 = Concentration of the first (C_1), 2nd (C_2), and 3rd (C_3) ice.
 S_1, S_2, S_3 = Stage of development of the first (S_1), 2nd (S_2), and 3rd (S_3) ice.
 C = Concentration of ice within areas of strip and patches.

STAGES OF DEVELOPMENT (THICKNESS)

- 1 = New ice (10 - 10 cm)
- 2 = Young ice (110 - 20 cm)
- 3 = First year (200 - 200 cm)
- 4 = First year (200 - 200 cm)
- 5 = First year (200 - 200 cm)
- 6 = First year (200 - 200 cm)
- 7 = Old ice (200 - 200 cm)

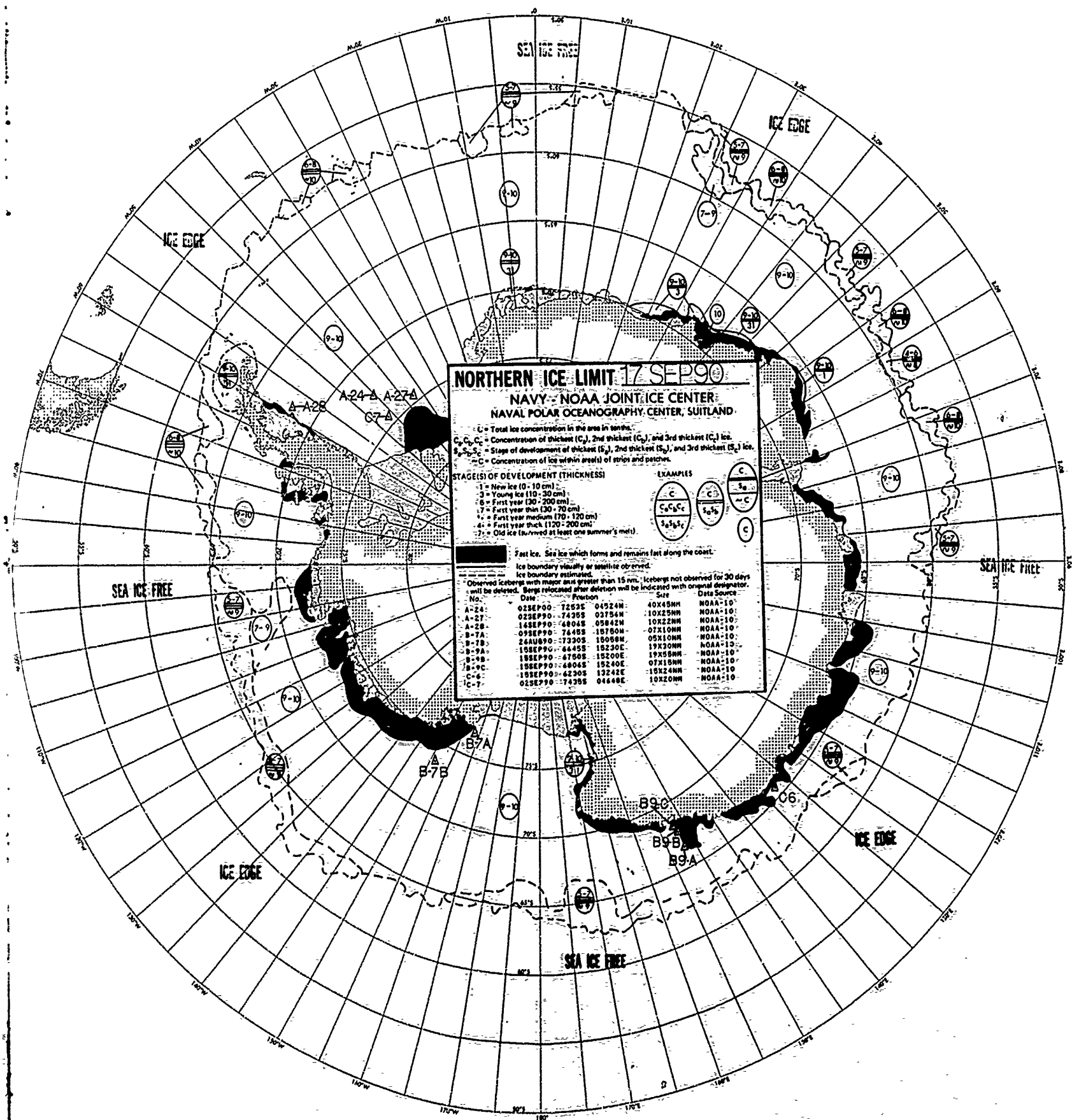
EXAMPLES

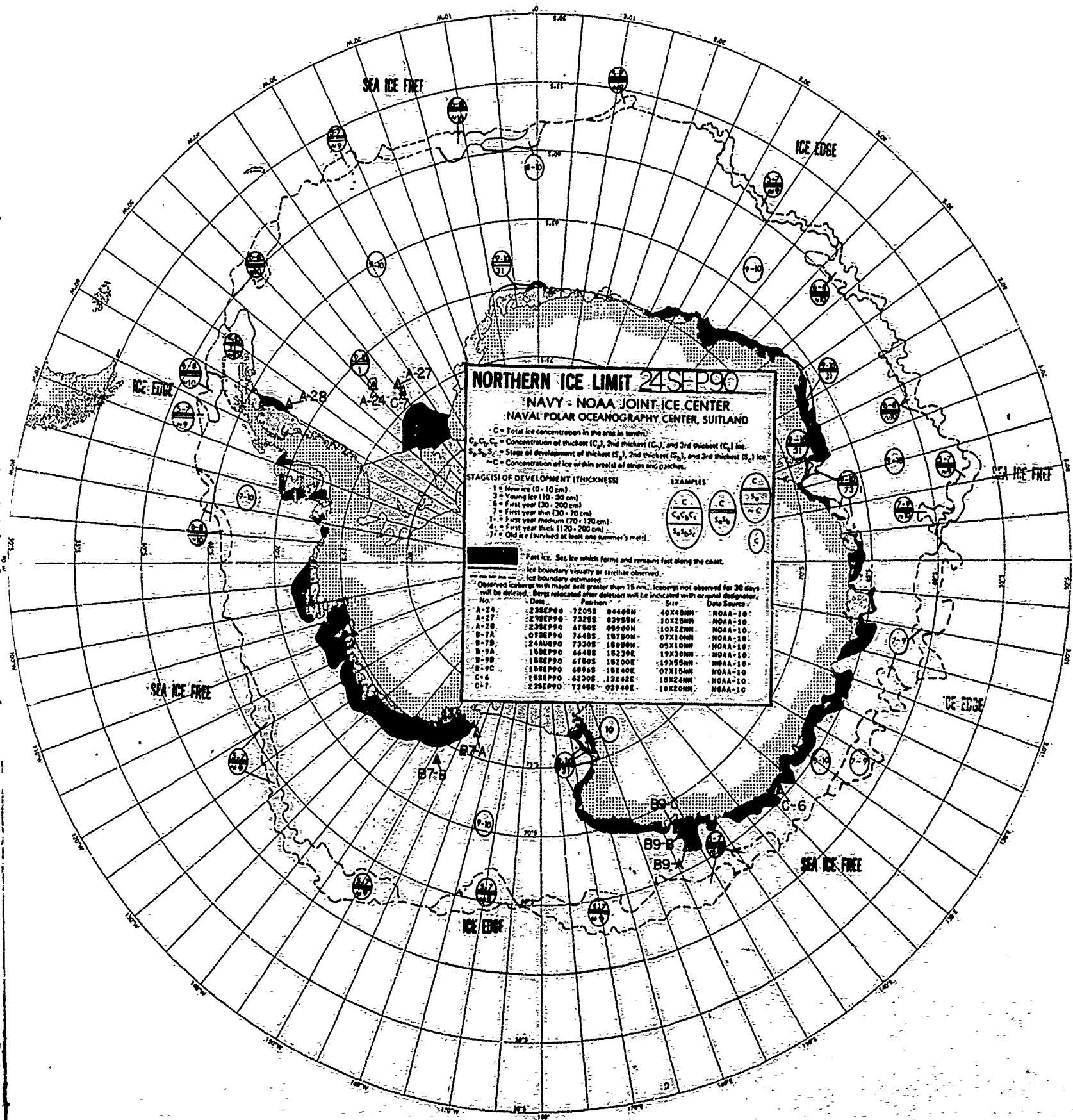
$\frac{C}{C_1 C_2 C_3}$
 $\frac{S_1 S_2 S_3}{S_1 S_2 S_3}$

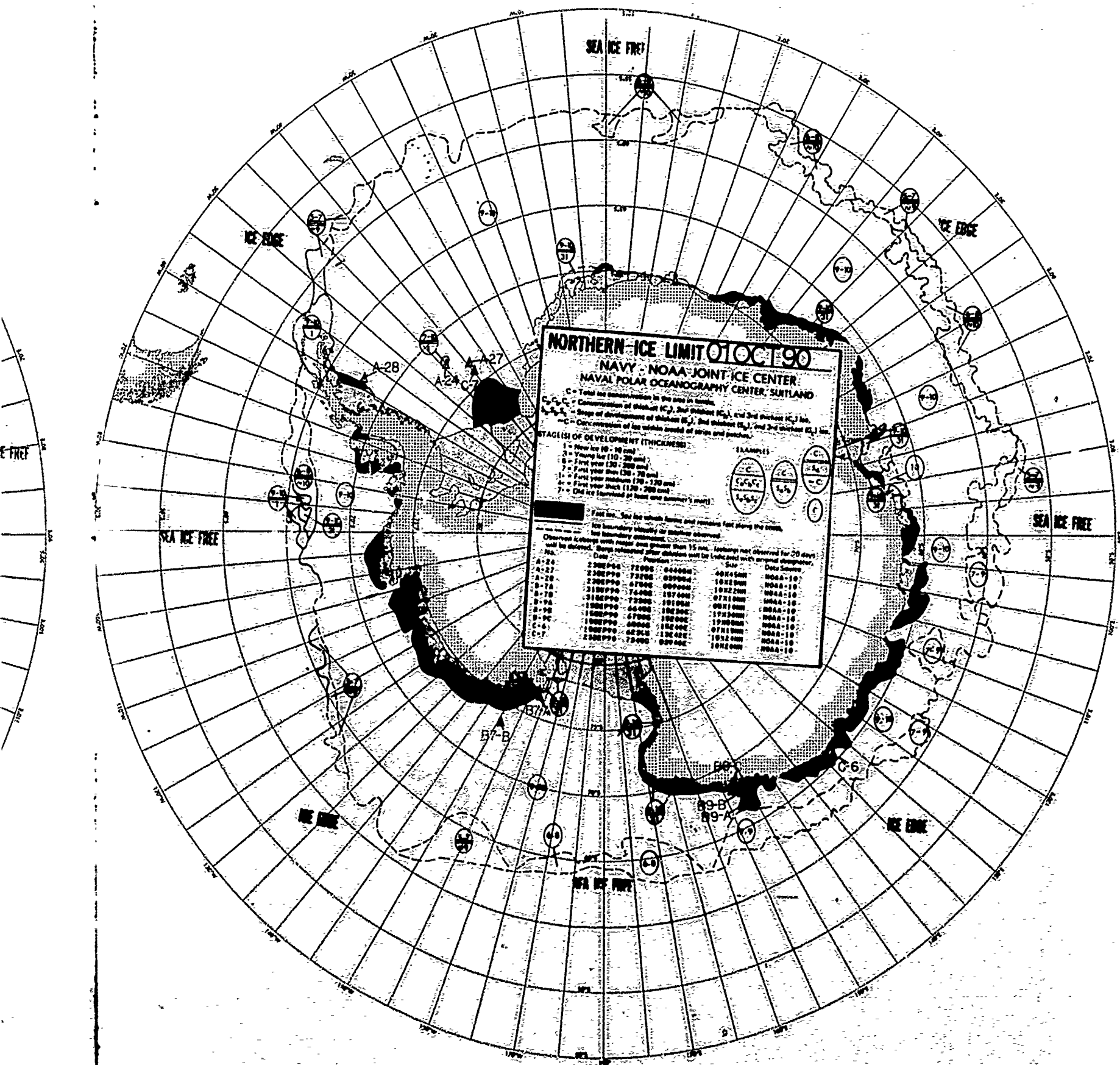
$\frac{C}{C_1 C_2 C_3}$
 $\frac{S_1 S_2 S_3}{S_1 S_2 S_3}$

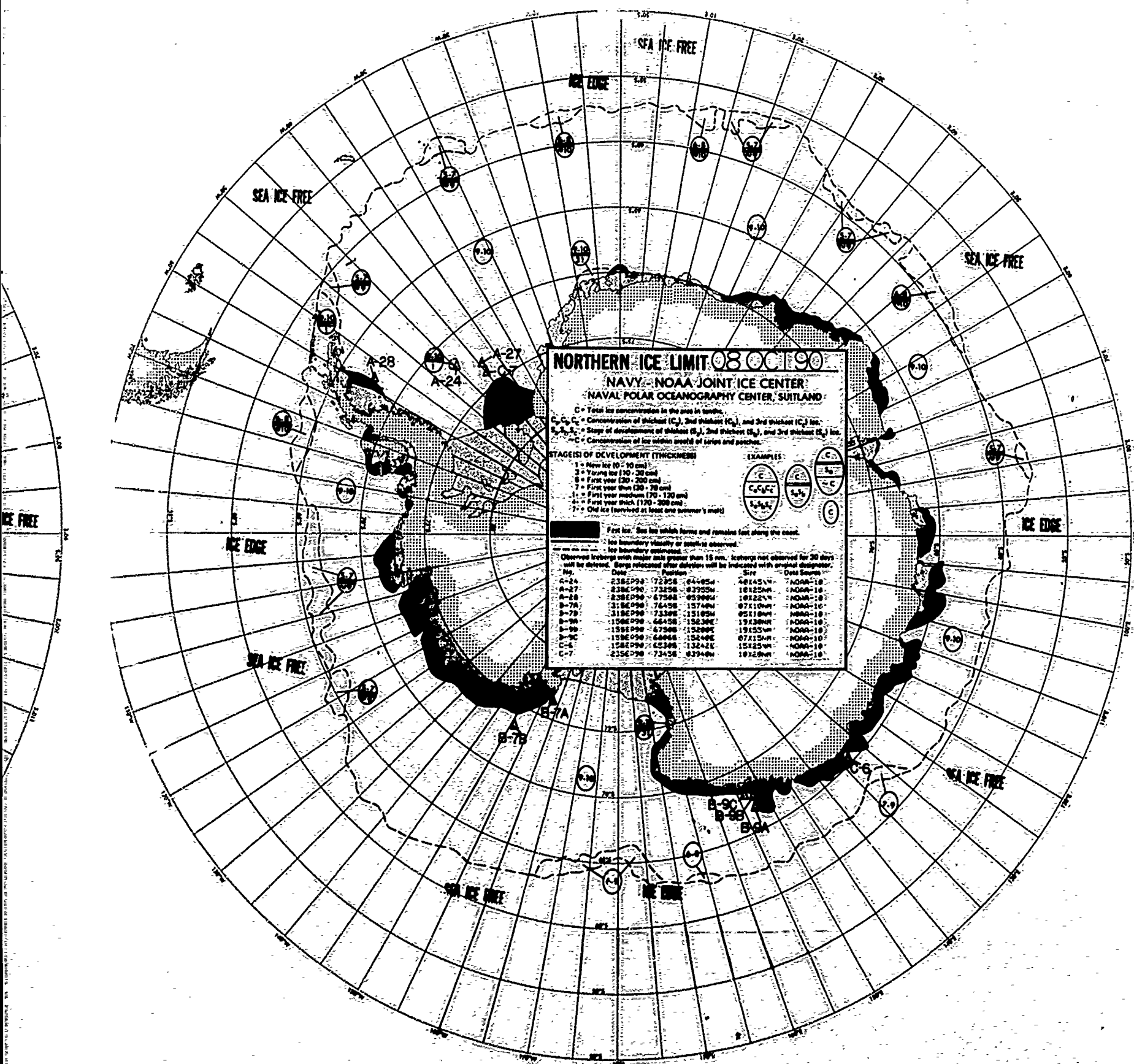
Fast ice. Sea ice which forms and remains fast along the coast.
Ice boundary visually or satellite observed.
Observed leadings with width less than 15 nm will be deleted. **Beings relocated after deletion will be** underlined with a small designator.
Leadings not observed for 30 days will be deleted.

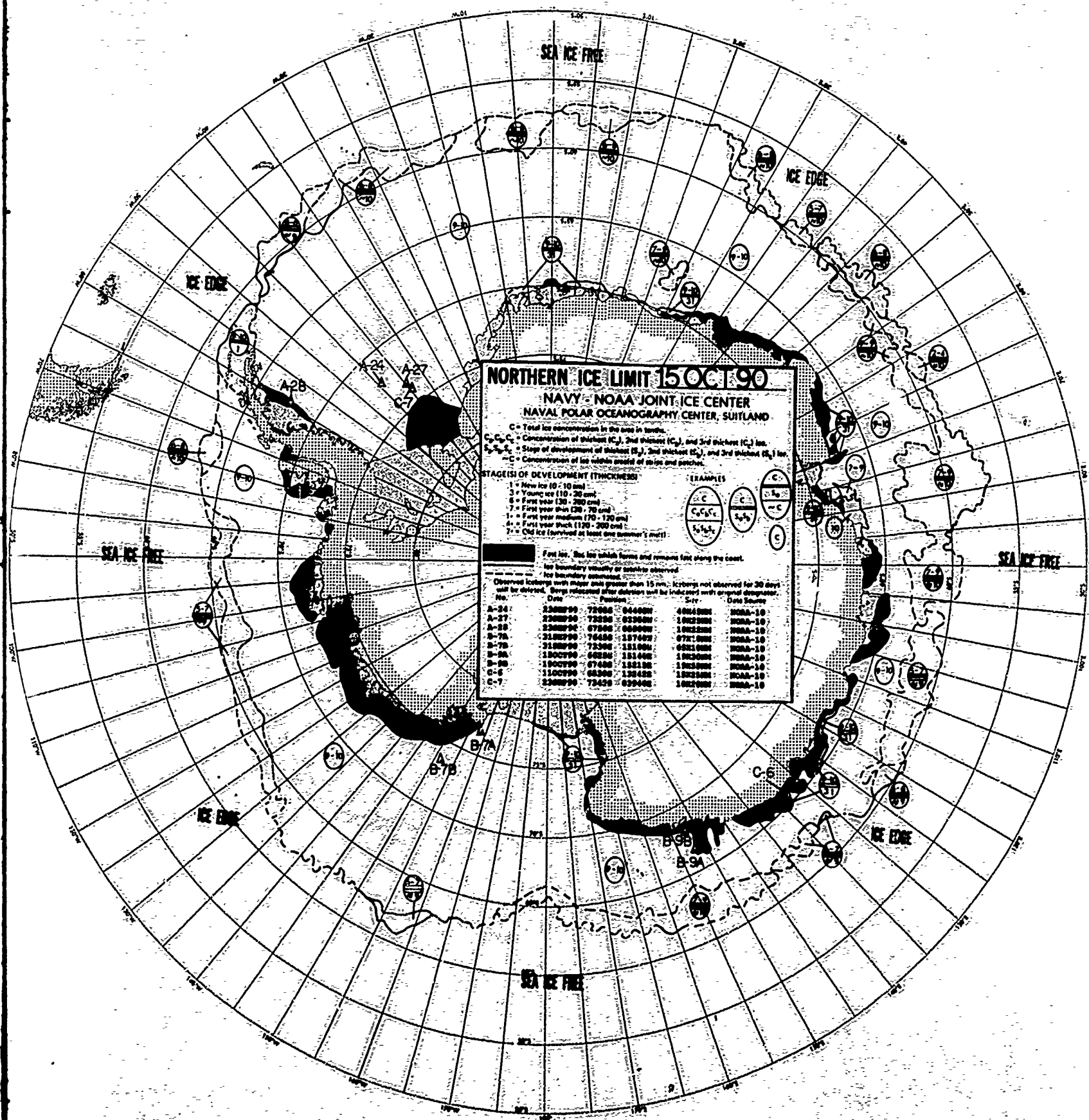
No.	Date	Position	Site	Data Source
A-24	02SEP90	72535	04524N	40X45NM NOAA-10
A-27	02SEP90	74355	03764N	10X125NM NOAA-10
A-28	11AUG90	47605	05960N	10X125NM NOAA-10
B-7A	30SEP90	74405	15700W	07X10NM NOAA-10
B-7B	26AUG90	13365	15058N	05X10NM NOAA-10
C-6	04SEP90	45455	13200E	15X124NM NOAA-10
C-7	02SEP90	74355	04440E	10X120NM NOAA-10

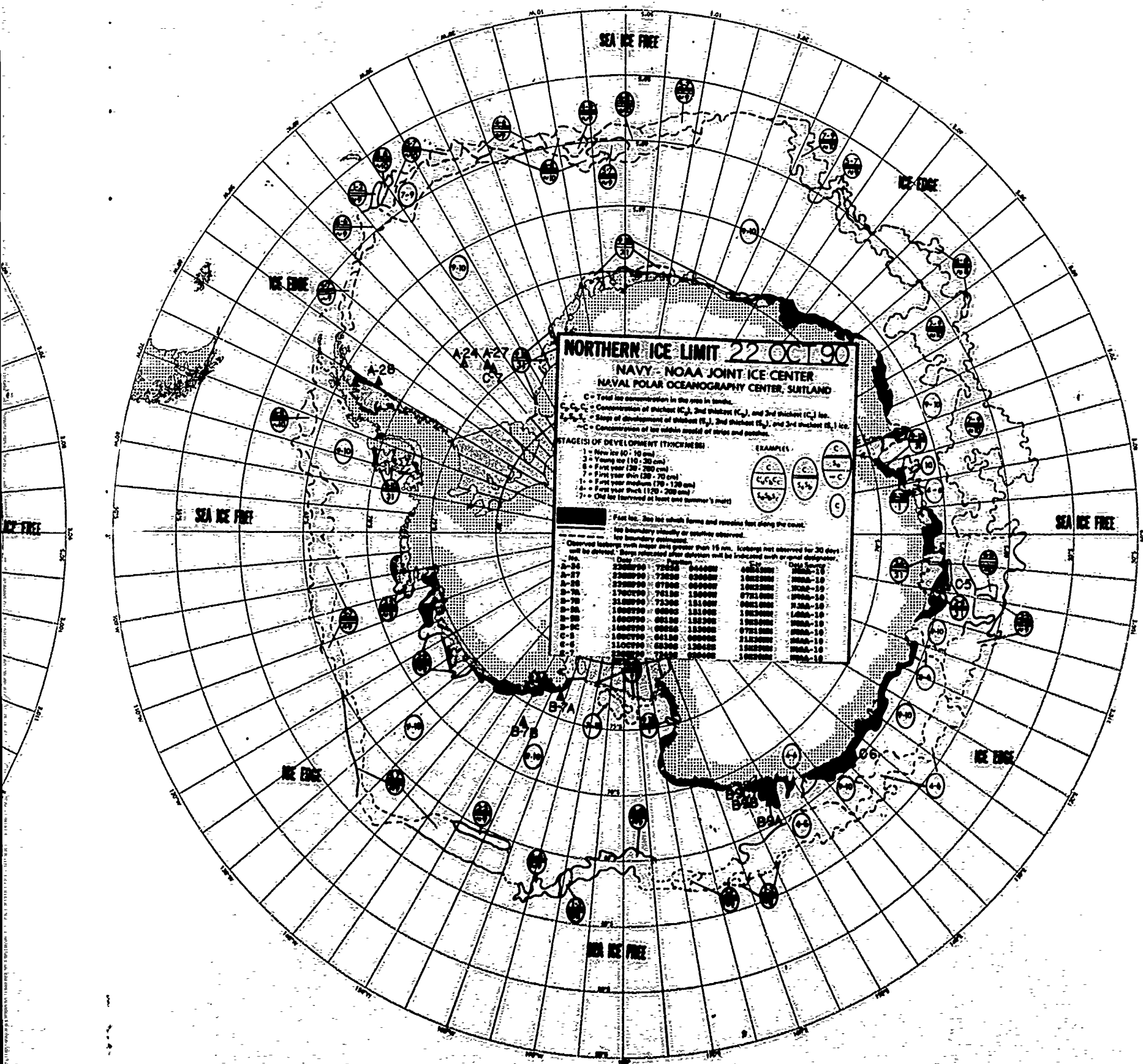


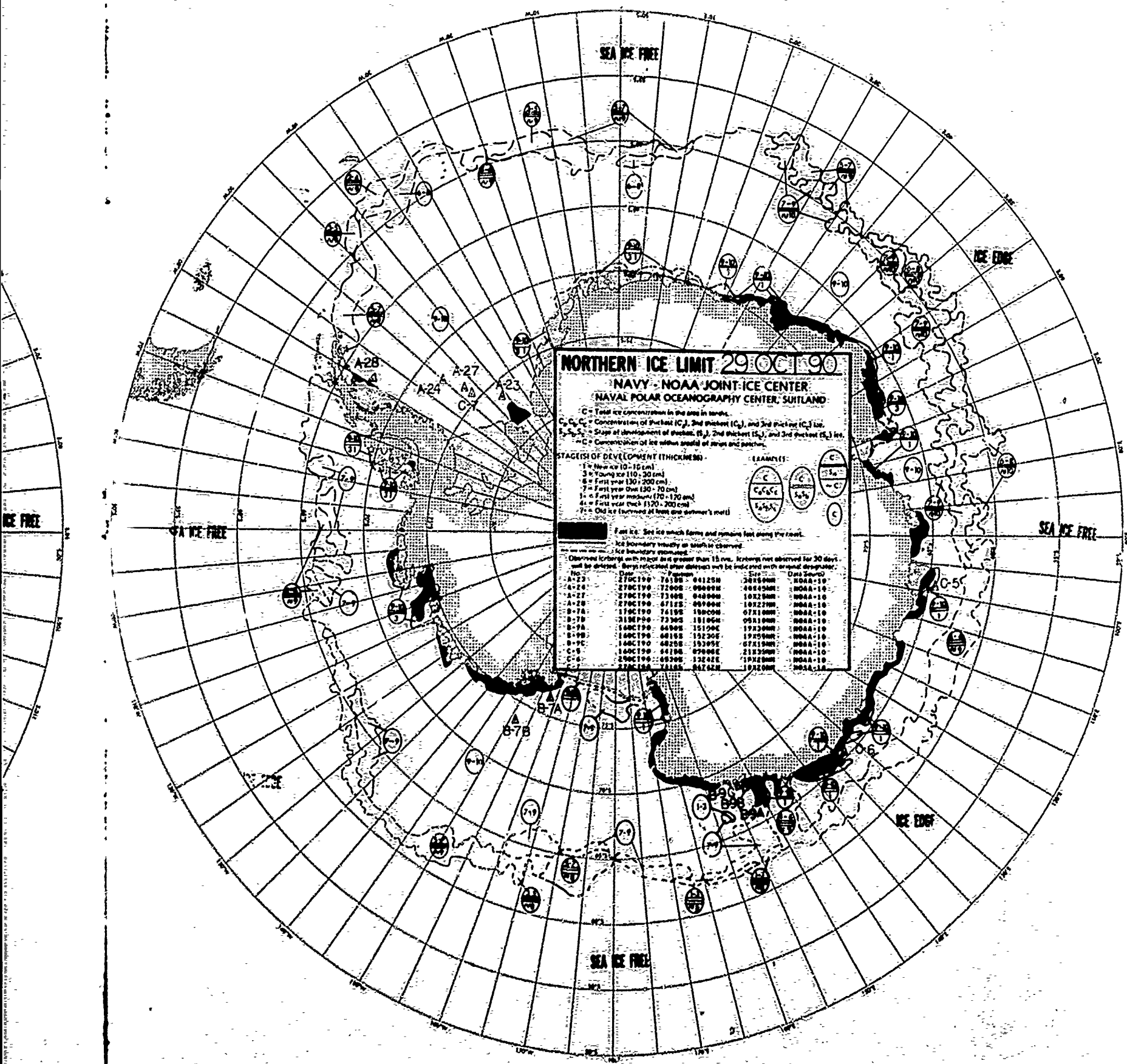


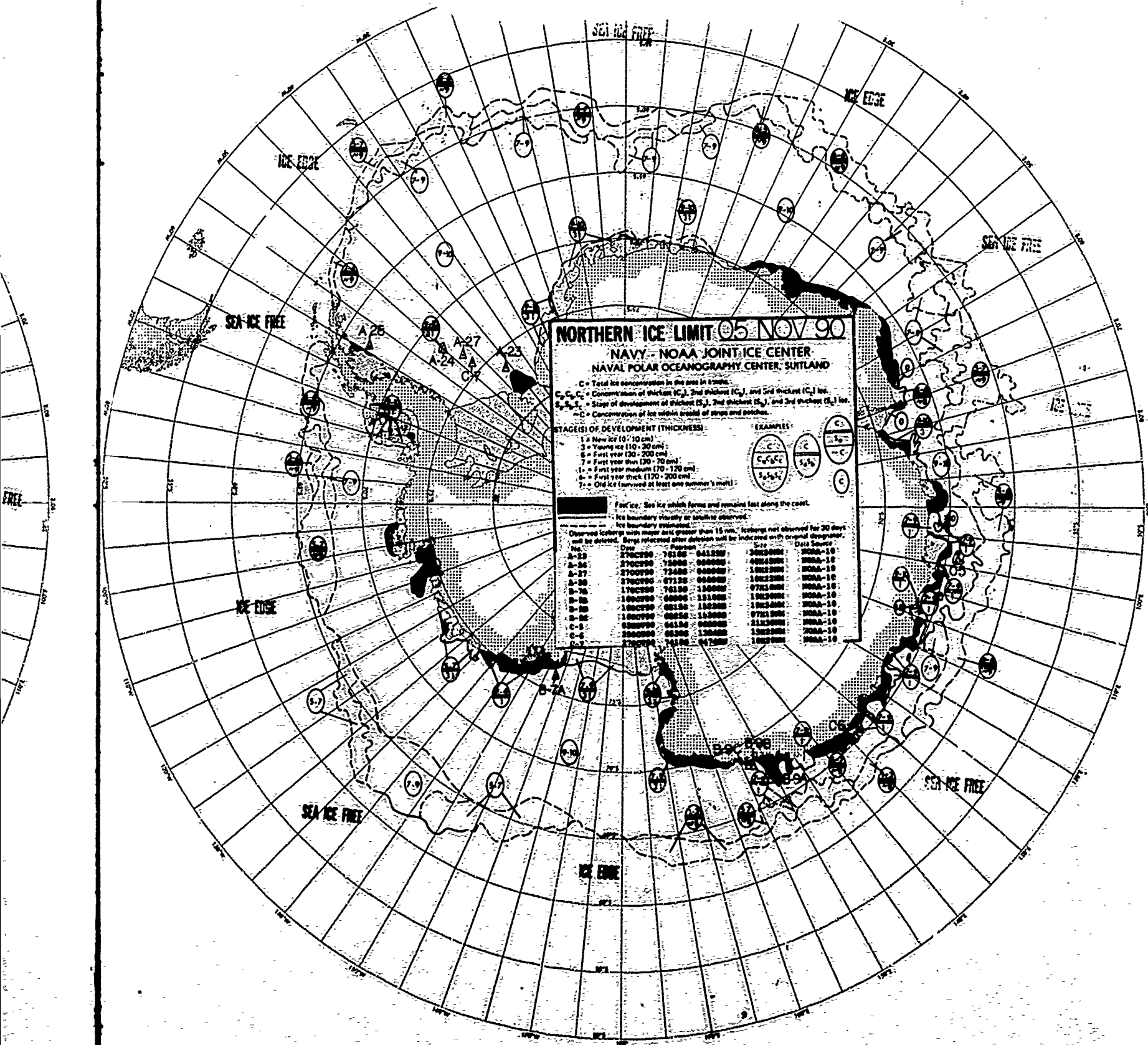


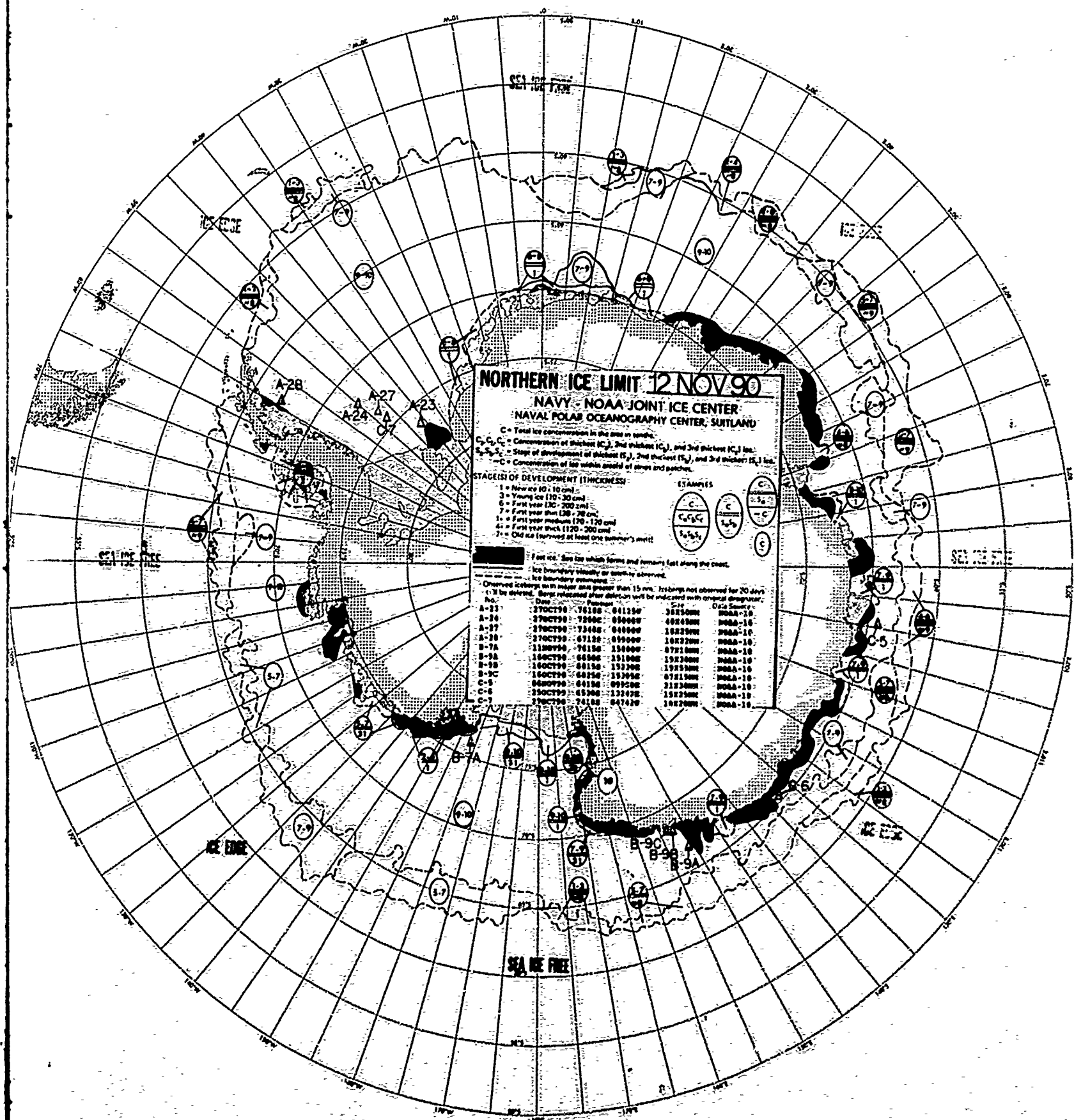


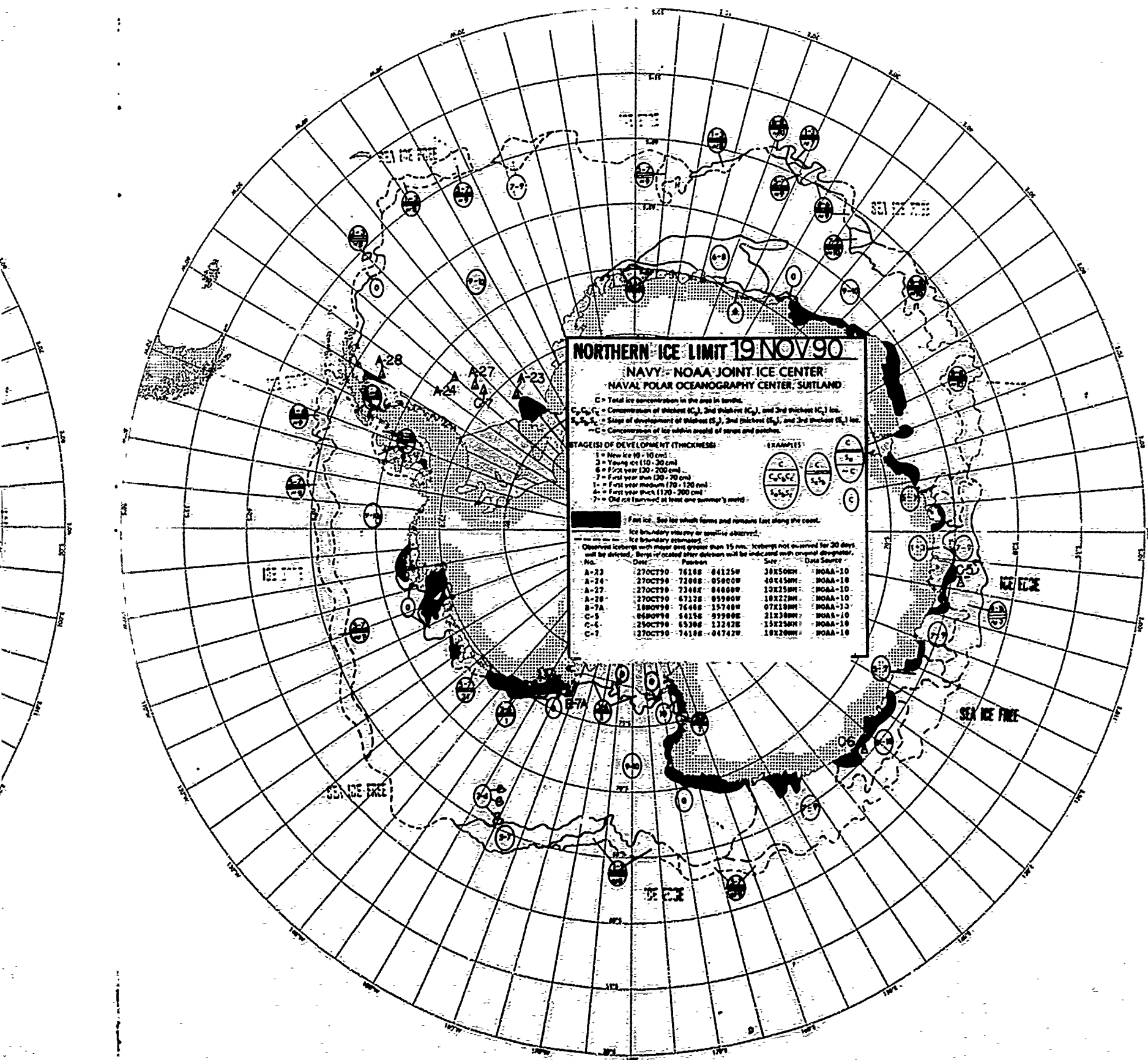


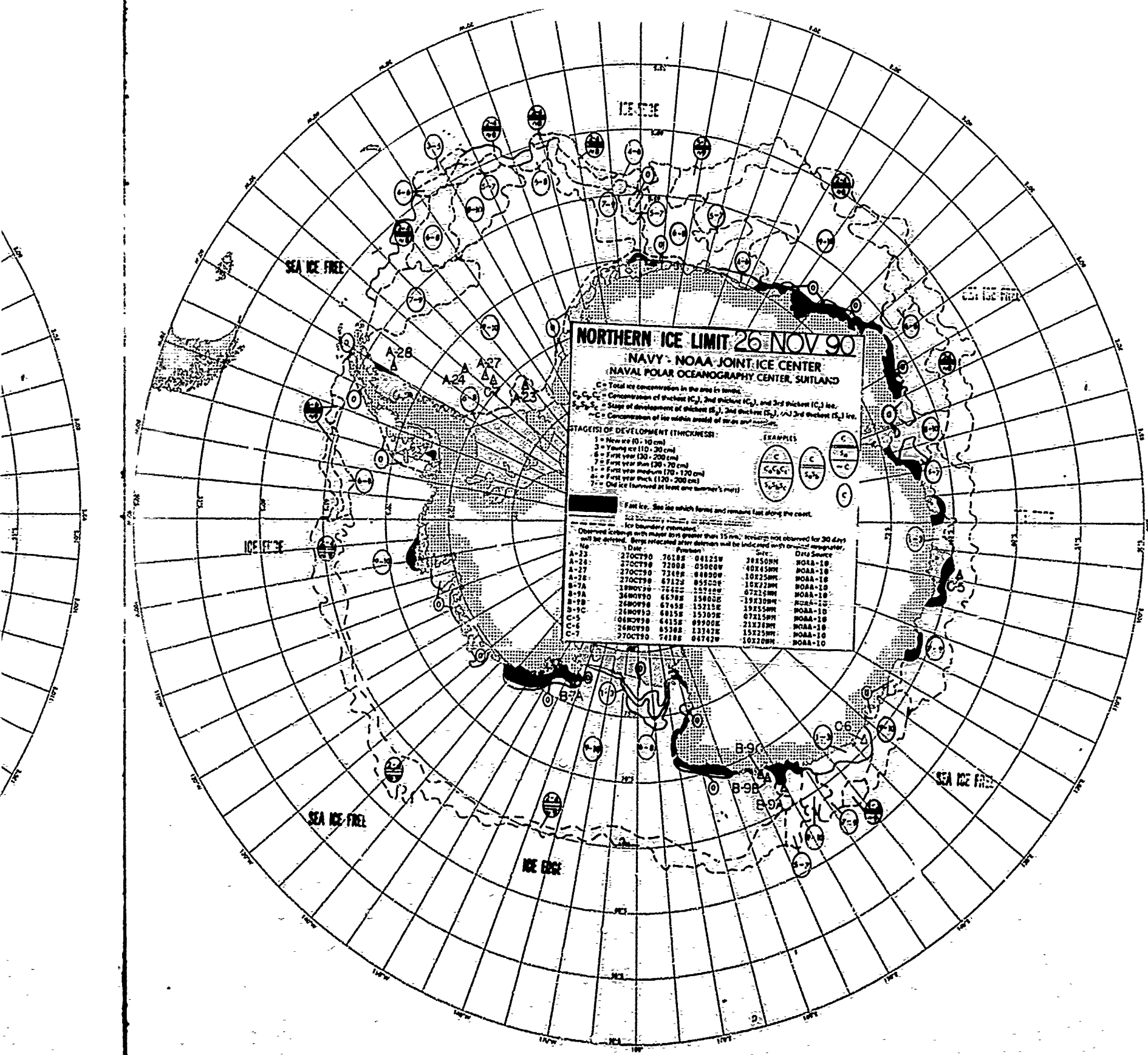


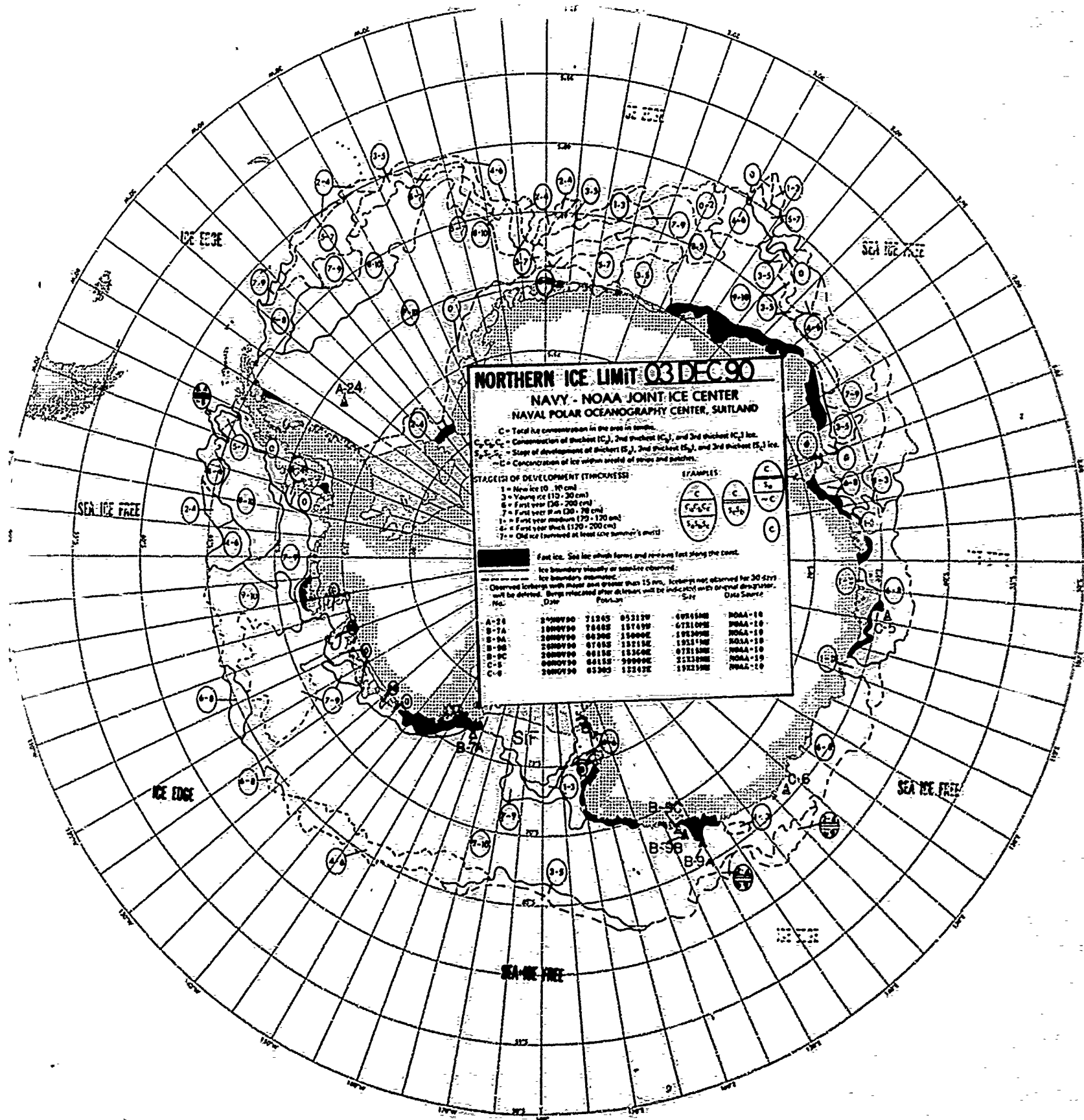


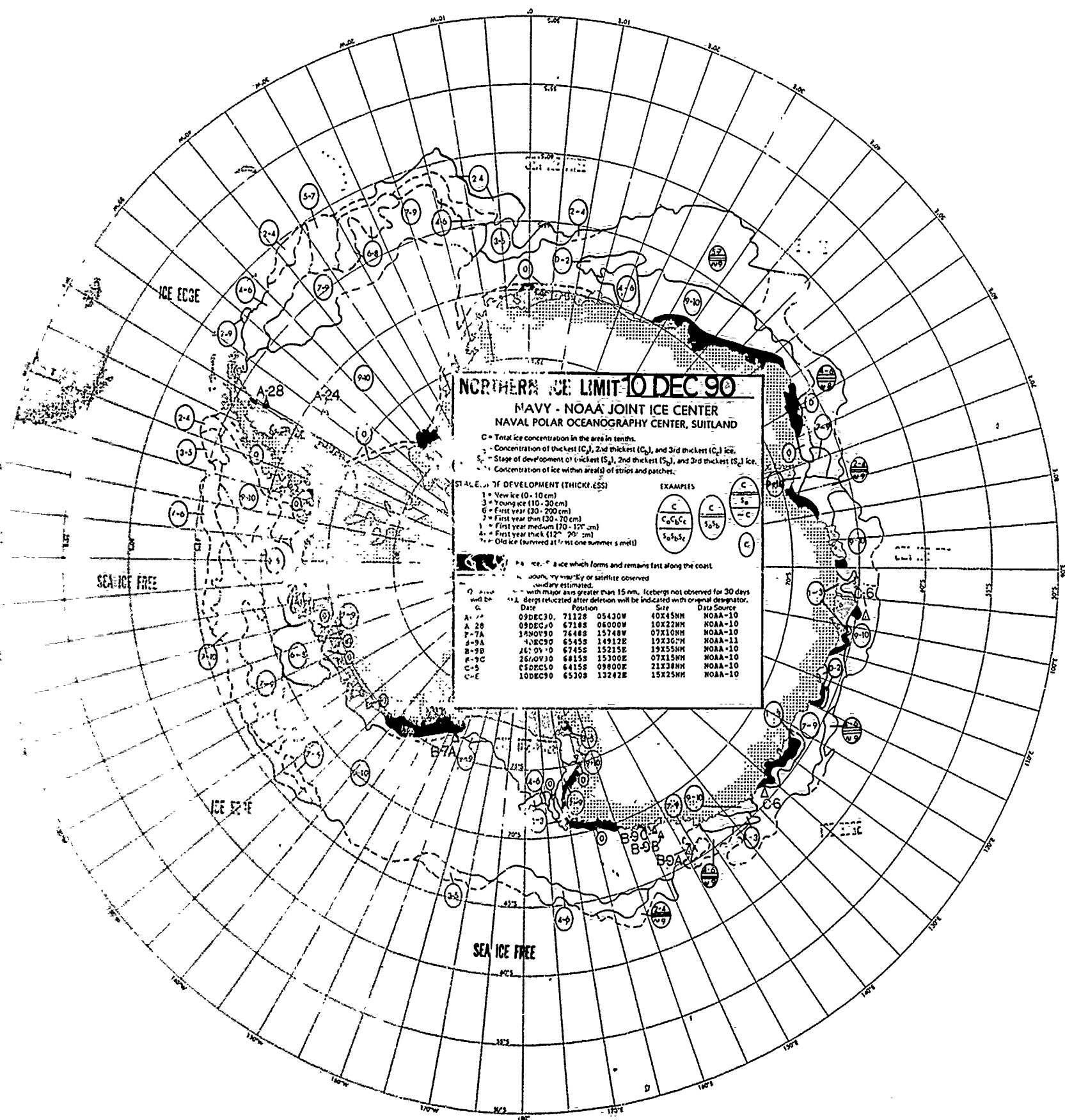


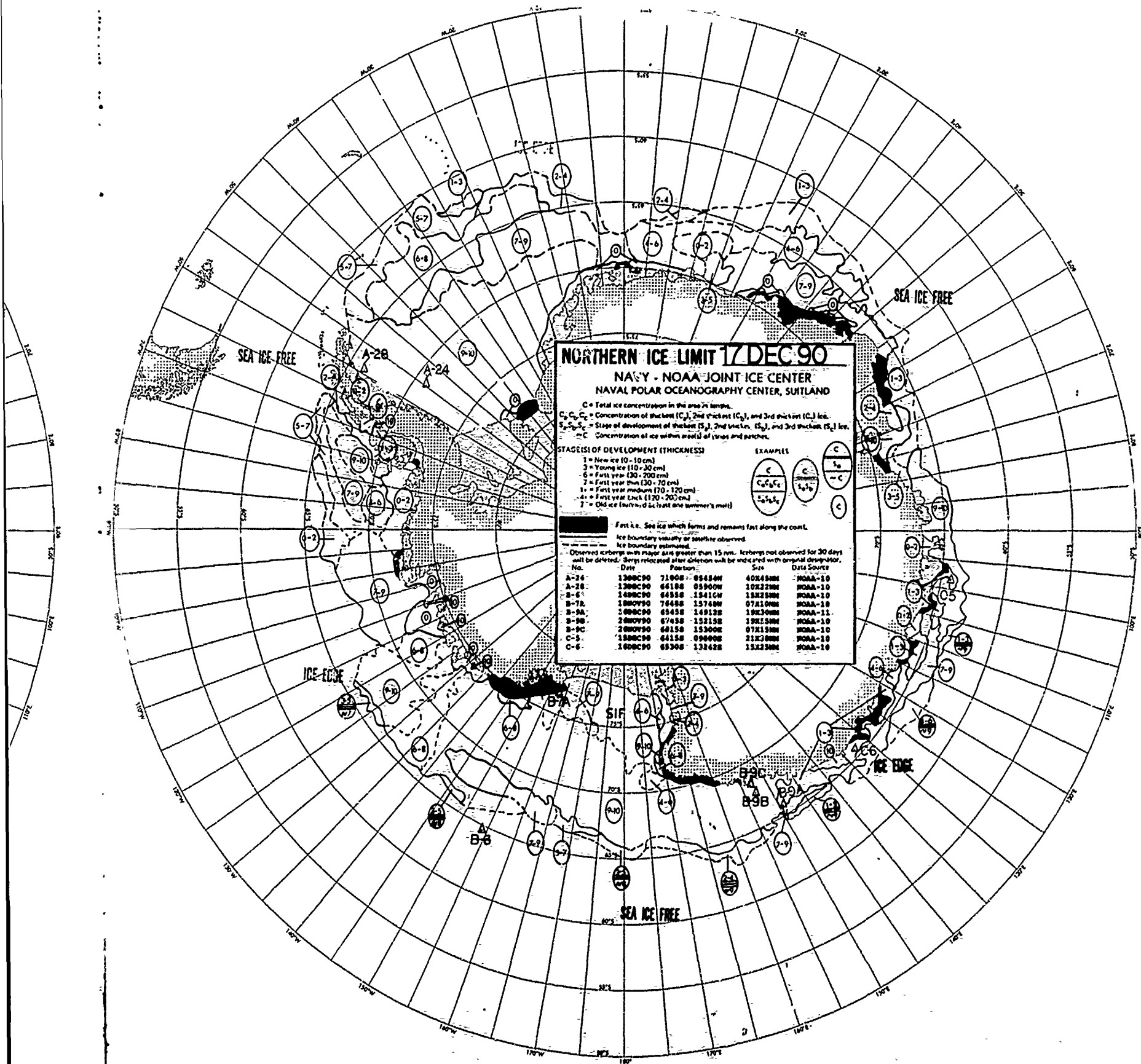


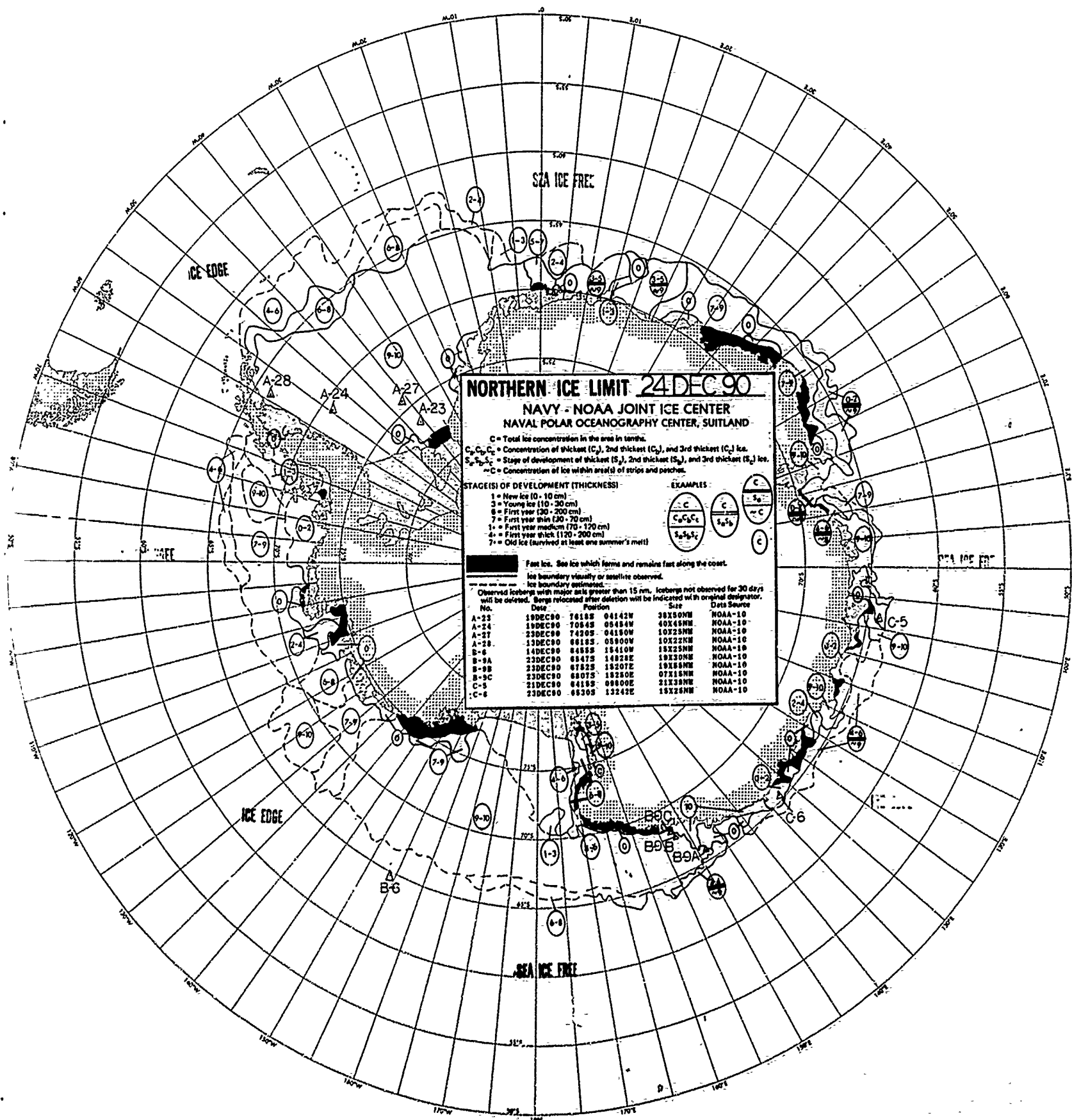


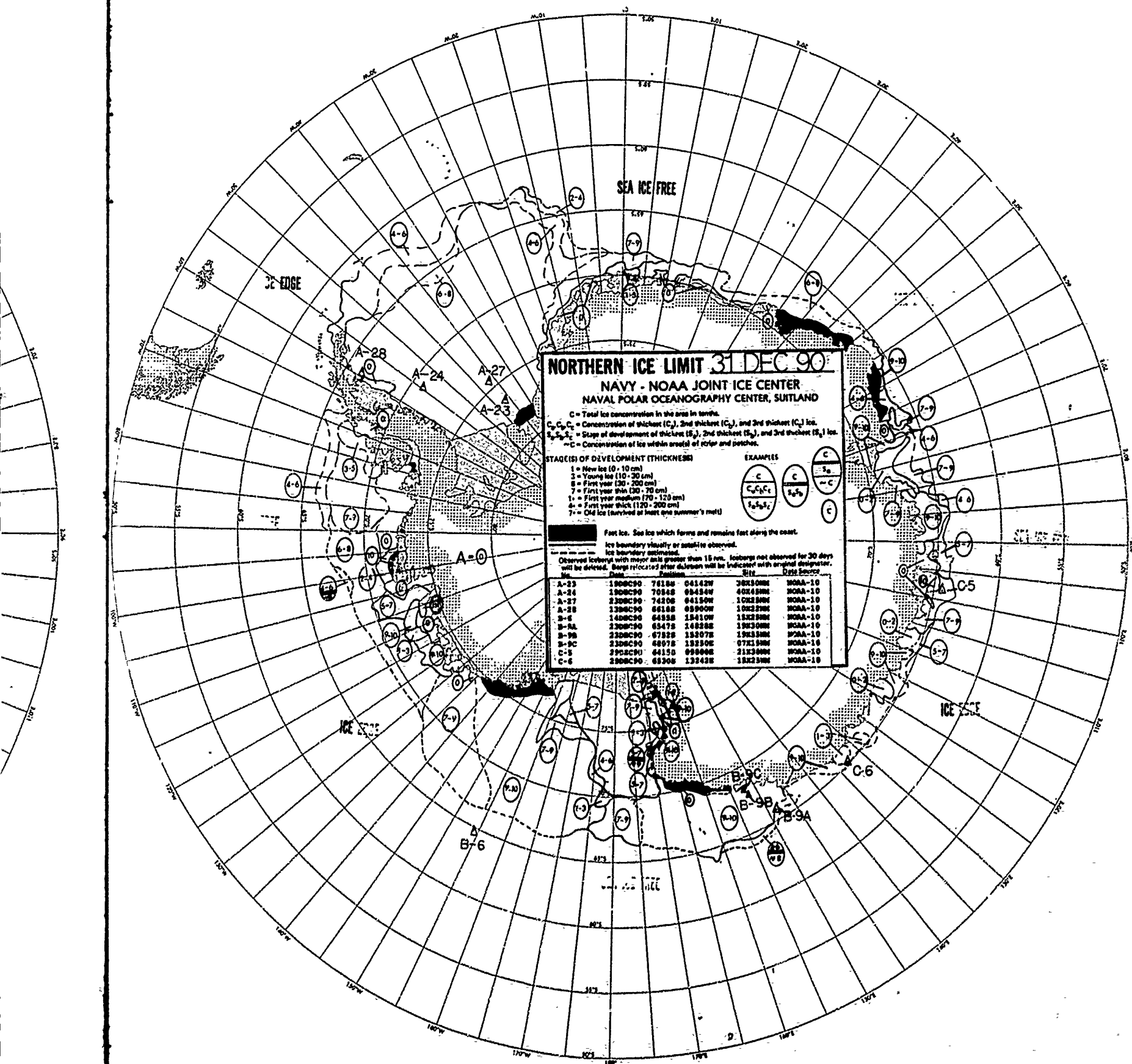












NORTHERN ICE LIMIT 31 DEC 90

NAVY - NOAA JOINT ICE CENTER
NAVAL POLAR OCEANOGRAPHY CENTER, SUITLAND

C = Total ice concentration in the area in tenths.
C₁, C₂, C₃ = Concentration of thickest (C₁), 2nd thickest (C₂), and 3rd thickest (C₃) ice.
S₁, S₂, S₃ = Stage of development of thickest (S₁), 2nd thickest (S₂), and 3rd thickest (S₃) ice.
-C = Concentration of ice within areas of error and patches.

STAGE(S) OF DEVELOPMENT (THICKNESS)

- 1 = New ice (10 - 10 cm)
- 2 = Young ice (10 - 30 cm)
- 3 = First year (30 - 200 cm)
- 4 = First year thin (30 - 70 cm)
- 5 = First year medium (70 - 120 cm)
- 6 = First year thick (120 - 200 cm)
- 7 = Old ice (survived at least one summer's melt)

EXAMPLES

$\frac{C}{C_1 C_2 C_3}$ $\frac{C}{S_1 S_2 S_3}$ $\frac{C}{S_1}$ $\frac{C}{S_2}$ $\frac{C}{S_3}$ $\frac{C}{-C}$

Fast ice. See ice which forms and remains fast along the coast.

Ice boundary visually or satellite observed.

Ice boundary estimated.

Observed icebergs with major axis greater than 15 m. Icebergs not observed for 30 days will be deleted. Berge relocated after deletion will be indicated with original designator.

No.	Date	Position	Size	Dist Source
A-23	1900C90	7615W 64142N	30X30NM	NOAA-10
A-24	1900C90	7054W 60454N	40X45NM	NOAA-10
A-27	2300C90	7420W 64150N	10X25NM	NOAA-10
A-28	1300C90	6610W 60900N	10X25NM	NOAA-10
B-6	1400C90	6435W 18410W	15X25NM	NOAA-10
B-9A	2300C90	6547W 14828E	19X30NM	NOAA-10
B-9B	2300C90	6732W 15307E	19X30NM	NOAA-10
B-9C	2300C90	6807W 15230E	07X15NM	NOAA-10
C-5	2900C90	6415W 69000E	21X25NM	NOAA-10
C-6	2900C90	6330W 13242E	15X25NM	NOAA-10